The Mining Journal,

RAILWAY AND COMMERCIAL GAZETTE:

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

[*The* MINING JOURNAL *is Registered at the General Post Office as a Newspaper, and for Transmission Abroad.*

No. 2535.—VOL. LIV. LONDON, SATURDAY, MARCH 22, 1884. [WITH SUPPLEMENT.] {PRICE ..... SIXPENCE {BY POST, £1 4s. PER ANNUM

PINOS ALTOS (MEXICO) MINING COMPANY (LIMITED).

Since the first publication of the Prospectus a letter has been received from the superintendent, dated 22nd Feb., 1884, giving the following latest intelligence from the mine:—

"11th Level Winze West.—I am very pleased to inform you the discovery still continues to produce very rich ore. In fact, the deeper we go the better the ore. Taking the strike of the ore, which is east, this rich shoot will be met with in the big stope east in a short time.

"13th Level End West.—This end is going under the winze at the 11th, and am very pleased to say is showing very good ore. When these two levels are communicated a valuable section of stoping ground will be laid open, far richer than it was supposed to be. Every foot we drive in this end shows an improvement. This discovery has been made since the inspection made by Mr. R. Rickard.

"13th End East.—We have here also, I am pleased to say, a most decided improvement. The part of the lode being carried is yielding very good ore.

"14th Level End West is also looking very well; so also are the stopes end east. The mine generally has greatly improved during the last two months.

ESTIMATED NET PROFIT UPWARDS OF £40,000 PER ANNUM.
ISSUE OF 150,000 TEN PER CENT. PREFERENCE SHARES OF £1 EACH OF THE

Pinos Altos (Mexico) Mining Company, Limited.

Registered under the Companies Acts, 1862 to 1880, whereby the liability of the Shareholders is limited to the amount of their Shares.

TOTAL CAPITAL OF THE COMPANY £250,000, IN 250,000 SHARES OF £1 EACH,

Of which 150,000 are Preference Shares as above, and 100,000 are Ordinary Shares issued as fully paid, for the purchase of the Property.

The Preference Shares are entitled to a cumulative preferential dividend of 10 per cent. until they have received 50 per cent. of their nominal value, when they will become Ordinary Shares, and they are also entitled to further advantages as to dividends, as explained in this Prospectus.

The present issue is of the above Preference Shares, payable as follows:—5s. on Application, 5s. on Allotment, and the balance in calls of not more than 5s. each, at intervals of not less than three months.

DIRECTORS.

Lieut.-Col. DAVID MILNE HOME, M.P., Paxton House, Berwick-on-Tweed, N.B., CHAIRMAN.
Sir THOMAS BUCHAN HEPBURN, Bart., Smeaton Hepburn, Prestonkirk, N.B.
Gen. Sir ARCHIBALD LITTLE, K.C.B., Tetbury Upton, Tetbury.
Lieut.-Col. CHARLES D. RICH, 3, Grove Crescent, Kingston-on-Thames.
ARCHIBALD BUCHAN HEPBURN, Esq., Junior Carlton Club, S.W.

The new Shareholders are authorised in General Meeting to increase this number to seven, and appoint two additional Directors.

BANKERS—BANK OF SCOTLAND, Edinburgh, London, and Branches in Scotland.
SOLICITORS—Messrs. COPE and CO., 3, Great George Street, Westminster, S.W.
BROKERS—Messrs. BULLOCK and WOLTON, St. Stephen's Chambers, Telegraph Street, E.C.
CONSULTING ENGINEERS—Messrs. RICKARD BROS., 58, Lombard Street, E.C.
AUDITORS—Messrs. CHATTERIS, NICHOLS, and CHATTERIS, 1, Queen Victoria Street, E.C.
SECRETARY.—J. B. PALMER, Esq.

REGISTERED OFFICES—49 and 50, PALACE CHAMBERS, BRIDGE STREET, WESTMINSTER, S.W.

PROSPECTUS.

This company is a reconstitution of the undertaking incorporated under the same title in 1879, and formed for the purpose of acquiring and working a very valuable gold and silver mining property, situate at Pinos Altos, in the State of Chihuahua, Mexico. The original company consisted almost wholly of the present directors and their friends, who, before inviting the public to take part in the enterprise, had determined to prove the value of the mines, and make them a paying concern.

Pinos Altos is situated on the western slope of the Sierra Madre Mountains, a region embracing many of the most famous mines of Mexico, and is distant about 250 miles from Chihuahua, on the Mexican Central Railroad, to which place there is direct communication. The mines can also be reached from Guaymas, on the seacoast, or Alamos. The climate is temperate and good. The country is well wooded, pine and oak being abundant for fuel and timber. A stream runs through the property, affording a permanent water supply.

The old company occupied the property from the date of their incorporation, and their grantors, who had themselves carried out considerable developments, were in possession for several years previously. Titles are officially recorded at Uruachic.

Shortly after the company's formation it was decided to send Mr. Luckhardt, an eminent mining engineer from San Francisco, to advise upon the value of the property and the best means of working it. His report, which is of a highly favourable nature, is open to inspection at the company's office, whilst extracts from a further report made by the same gentleman in June, 1881, will be found herewith.

The early workings had been conducted in a very primitive manner; it was, therefore, determined, as soon as the company took possession, to replace the old with improved new machinery and to develope the property as much as possible. Thus, since operations were commenced in 1879 the shaft of the main (Santo Niño) lode has been continued to a depth of over 700 ft.; a new mill of 45 stamps has been put up; new hoisting works have been erected, and corresponding developments have been carried out throughout. Moreover, bullion is being produced at the rate of £50,000 per annum. The exact yield for the year 1882 was $248,141·15 (say, £49,628), and for 1883 the return was $247,101·78 (say, £49,420·35).

Besides the Santo Niño there are other lodes within the boundary of the company's territory, on all of which important preparatory work has been done demonstrating the valuable character of the property. These are the Victoria, the Santo Elijio, the Alma de Maria, and the Providencia.

The directors having engaged the services of Mr. J. M. Rogers, formerly with Messrs. John Taylor and Sons, sent him out to the mine in December, 1882. A copy of his report dated 9th January, 1883, will also be found herewith.

In the original purchase and in the above operations there has been expended nearly £200,000, a considerable part of which has been borrowed. Further capital being necessary, it has been decided to reconstitute the company on the basis stated above. As a preliminary to this course, the board determined to obtain independent testimony of the value of the property, and accordingly made arrangements with Messrs. Rickard Bros., of Lombard-street, London, for one of their firm proceeding to Pinos Altos, and reporting upon it. The gentleman selected was Mr. Reuben Rickard, whose full report, dated 29th December, 1883, can be seen at the company's office, and extracts therefrom accompany this prospectus.

Of the Santo Niño, lode, Mr. Rickard says:—

"I consider the Santa Niño lode one of undoubted permanence, and, if properly equipped and developed, it cannot fail to be highly remunerative."

The ore in sight, giving an average assay value of $38·80 per ton, Mr. Rickard estimated at 26,610 tons, but in order to permit a safe valuation to be made he has taken $35 per ton only as a basis for his calculations. At this figure—

The 26,610 tons of ore would produce	$698,512·50
Deduct mint charges, discount, cost of working, &c., as set out in the report	418,508·77
And the actual cash value would be	$280,003·73
Or, say, £56,000.	

A considerable increase has been made in the quantity of ore in sight since Mr. Rickard's visit to the mine, and there are also large reserves of lower grade ore exposed, averaging from $10 to $25 per ton, of which no account has been taken in his calculations, but a considerable proportion of which can be profitably worked after the suggested improvements are carried out.

Of the whole property Mr. Rickard says:—

"I have no hesitation in saying that the property of the Pinos Altos Company is a very valuable one, and if the foregoing recommendations are vigorously carried into effect, will prove to be very remunerative, and permanently so."

When the improvements recommended are completed, i.e., in nine months from the present time, Mr. Rickard estimates a monthly profit or $17,677·80, or $212,133 60 (say) £42,426 per annum. This return would be almost three times as much as the total annual interest on the preference shares, and would permit the payment of a dividend of nearly 17 per cent. upon the whole capital of the company. Some reduction should, however, be made from this estimate to cover administration expenses on this side, though these will, it is anticipated, be more than met by the increased yield to be obtained after the completion of the tunnel referred to in the reports.

Out of the proceeds of the present issue of preference shares, after setting aside sufficient for working capital, and for the additional outlay contemplated in Mr. Rickard's report, £110,000 will be devoted to the redemption of the debentures, and the payment of the floating debt of the old company. Should the subscription not be sufficient to meet the above £110,000, the creditors of the old company have agreed to take preference shares for any deficiency, by which means the new company will be started entirely free from debt.

The shareholders in the old company have accepted the ordinary shares in full compensation of their personal outlay and interests, and they will also defray the expenses of and incident to the formation of the present company up to the date of allotment of the shares.

The preference shares now offered for subscription will, in the first place, and until they are converted into ordinary shares, be entitled to a cumulative preferential dividend of £10 per cent. per annum, and the balance of yearly profit resulting from the operations of the company will, after paying £10 per cent. on the ordinary shares and providing a reserve fund, be distributed among all the shares of the company. After the conversion of the preference into ordinary shares, all the capital will rank equally for dividends.

The present company take to the mine and works from the old company as a going concern, but all wages at the mine up to the 29th February, 1884, will be discharged out of the assets of the old company.

The following agreements have been entered into and can be seen at the office of the solicitors, viz.:—

Agreement dated 30th January, 1884, made between James McDouall, of the one part, and Alexander Storer of the other part.

Agreement dated 28th February, 1884, made between the old company, of the first part, James Buckland Palmer, of the second part, and the new company, of the third part.

Applications may be made in the enclosed form accompanied by a payment of 5s. per share on the number of shares applied for and be forwarded to the Bank of Scotland, Edinburgh; London (Lothbury, E.C.), or any branch in Scotland.

Where no allotment is made, the application money will be returned in full.

In default of payment of the sum due on allotment, or of any of the subsequent instalments, the allotment and all payments will be liable to forfeiture.

If in any case a less number of shares than are applied for be allotted the surplus of the deposit on application will be applied towards the amount payable on allotment.

Application will be made for a Stock Exchange settlement and quotation immediately after allotment.

Prospectuses and Forms of Application for shares can be procured from the company's office, and every information obtained from the secretary.

London, 29th February, 1884.

Registration of New Companies.

The following joint-stock companies have been duly registered:—

THE RAILWAY ELECTRICAL CONTRACTORS (Limited). - Capital 25,000*l.*, in shares of 5*l.* The general business of workers and dealers in electrical motive power and light, in connection with patents. The subscribers are—Sir D. Cooper, 3, de Ver-gardens, 50; J. S. Sellon, 78, Hatton Garden, 50; F. Pavy, Beckley, 50; W. J. Cardner, 30, Leadenhall-buildings, 50; J. Pender, 18, Arlington-street, 50; H. Collet, 7, Coleridge-street, 25; T. M. Collet, 4, Great Winchester-street, 50.

GREAT WEST SHEPHERDS (Limited).—Capital 50,000*l.*, in shares of 1*l.* To purchase, or otherwise acquire, lands, mines, and mineral properties and rights and interests in lands, mines, and mineral properties and minerals in Cornwall and elsewhere in England, for the purpose of carrying on all operations incidental to a mining company; and to deal in, sell, and dispose of ores and minerals, and any other products. The subscribers (who take one share each) are—J. Hughff, 13, St. George's-terrace, accountant; S. G. Hinton, Poplar, secretary; H. A. Long, 28, Mare-street, clerk; A. Harvey, Tottenham, merchant; T. G. Shandlow, Tottenham, cashier; W. J. Twentyman, 264, Amherst-road, accountant; T. R. Staubra, 78, Walterton-road, clerk. The number of directors must not exceed six, or be less than three. Six of the subscribers will constitute the first board.

DENNIS' SHIPS PAINT COMPANY (Limited).—Capital 50,000*l.*, in shares of 10*l.* The manufacture, preparation, and sale of painting, or protecting compositions, or materials in connection with certain patents. The subscribers (who take one share each) are—L. Glass, 8, Idol-lane; A. Johnston, 8, Idol-lane; A. J. Cole, 1, Mincing-lane; T. Rich, 102, Fenchurch-street; J. S. Campbell, 1, Queen's Gate-place; J. B. Denny, 5, Craven-street; A. Lovekin, 7, Mincing-lane.

THE FFALDAU COLLIERY COMPANY (Limited).—Capital 80,000*l.*, in shares of 50*l.* To purchase or otherwise acquire, according to the terms of a contract, the Ffaldau Colliery, and the buildings, machinery, plant, rolling and other stock, situated in South Wales. The working, raising, manufacturing, and selling of coal, iron, ironstone, blackband, and fire-clay, coke, bricks, tiles, &c. The subscribers are—T. Pyman, Cardiff, shipowner, 100; T. E. Watson, Cardiff, shipowner, 100; W. Lishman, Witton-le-Wear, colliery owner, 20; C. L. Vaugh, Pont-y-cymma,, mining engineer, 20; E. Waugh, Cockermouth, M.P., 100; W. Chamberlain, Birmingham, no occupation, 1; P. A. V. Robinson, Cardiff, merchant, 1.

THE METROPOLITAN GUARANTEE AND ACCIDENT INSURANCE COMPANY (Limited).—Capital 25,000*l.*, in shares of 2*l.* Accident insurance business, to lend and borrow money, undertake guarantees and suretyships, &c. The subscribers (who take one share each) are—R. P. Scott, Walworth; H. A. Thiselton, Walworth; E. Coote, Clerkenwell; W. Richardson, 65, Lansdown-road; E. T. Watson, Walworth; J. Young, Finsbury; D. Ingles, Leyton.

THE PAPYRUS FIBRE COMPANY (Limited).—Capital 20,000*l.*, in shares of 5*l.* The manufacture in Great Britain of half stuff and paper, and dispose of and sell same. The subscribers (who take 20 shares) are—T. Strabam, South Shields; W. L. Rennoldson, South Shields; G. F. Shotton, North Shields; M. Graham, South Shields; J. A. Monks, Durham; P. Smith, Manchester,; A. Carlisle, Clitheroe.

THE EMPIRE THEATRE (Limited).—Capital 20,000*l.*, in shares of 1000*l.* To acquire a theatre situated in Leicester-square, London, and to carry on the business of a theatre proprietor and manager. The subscribers (who take one share each) are—F. B. B. Lane, 45, Courtfield Gardens; W. G. F. Hunt, 8, Duke-street; E. J. H. Appleyard, 98, Richmond-road; T. H. Bolton, 11, Gray's Inn-square; Lord A. Paget, 56, Queen Anne-street; S. Lewis, 1, Albany Court-yard; H. K. Karman, 1, Cleveland Gardens.

THE WEST END COMPANY (Limited).—Capital 6000*l.*, in shares of 5*l.* To acquire and carry on a hat and cap manufacturing business, situated at Denton, Lancashire. The subscribers are—T. Woolfenden, Denton, 50; J. Limmy, Denton, 60; J. C. Howe, Denton, 40; J. Ashworth, Denton, 20; J. Woolfenden, Denton, 40; W. Brown, Denton, 50; J. W. Thompson, Manchester, 20; J. Woolfenden, jun., Denton, 30.

THE NANT-Y-GLO COLLIERY COMPANY (Limited).—Capital 12,000*l.*, in shares of 100*l.* To acquire a certain property situated in Monmouthshire, including the Forge Pit, the Wainrhelygen Pit, and the Bydelog, belonging to the Llyn Colliery Company (Limited), for the purpose of carrying on the trades of ironmasters, colliery proprietors, coke manufacturers, smelters, engineers, steel converters, and iron founders in all their respective branches. The subscribers (who take one share each) are—M. Hayes, Newport, merchant; G. Lee, Cardiff, shipowner; W. B. Gibb, Cardiff, shipowner; J. Long, Cardiff, shipowner; J. Lee, Cardiff, merchant; T. Pugsley, Newport, merchant; F. Lewis, Caerleon, law student.

THE LAND AND LOAN COMPANY OF NEW ZEALAND (Limited).—Capital 1,000,000*l.*, in shares of 5*l.* The usual business of a land and mortgage company in all branches. The subscribers are—J. Alexander, 3, Great Winchester-street, 1000*l.*; W. D. Anderson, 37A, Mincing-lane, 500; G. Beltham, 3, Great Winchester-street, 500; A. Chetham-Strode, Upper Norwood, 400; F. C. Fulton, 82, Cambridge-terrace, 1000; R. Strachey, Clapham, 500; R. T. Turnbull, 5, East India Avenue, 400; W. C. Young, 11, Clement's-lane, 500.

THE KELLY GOLD PLACER MINING COMPANY (Limited).—Capital 75,000*l.*, in shares of 1*l.* To purchase or otherwise acquire land, gold mines, placers, mining rights, and minerals in Montana, United States of America, or elsewhere, and to explore, work, and develope the mineral and other resources of the properties so to be acquired, and to carry on the general business of miners and mining engineers; also of smelters and reducers of ores and minerals obtained from any mines, veins, lodes, or mining rights acquired by this company. The subscribers (who take one share each) are—W. W. Anderson, United Service Club, lieutenant-general; W. Alexander, Ifield Crawley, major-general; E. S. Anderson, 52, Queen Victoria-street, merchant; F. Purser, 28, St. Swithin's-lane, agent; A. H. Powell, 2, The Mall, merchant; A. J. Stewart, Tavistock Hotel, M.E.; G. R. Sampson, 22, Talbot-road, merchant.

THE ENGLISH COTTON PRESSING COMPANY (Limited).—Capital 10,000*l.*, in shares of 20*l.* To purchase for 10,000*l.* certain works situated at Alexandria, and to continue the business in connection therewith. The subscribers are—C. Peel, Manchester, 170; F. C. Baines, Alexandria, 100; J. Binder, Alexandria, 100; L. H. Birch, Alexandria, 30; J. Barr, Alexandria, 25; N. G. Casulli, Alexandria, 50; W. Getty, Alexandria, 25.

MORGAN'S SOAPWORKS (Limited).— Capital 20,000*l.*, in shares of 10*l.* To purchase and carry on a soap manufacturing business established at Tudor-place, Tottenham Court-road, London. The subscribers (who take one share each) are—D. Mackay, 3, Lothbury; E. Price, 3, Lothbury; J. L. Bened, 44, Welbeck-street; T. Douglas, Lewisham; J. Garden, Tottenham; N. G. Paterson, Tottenham; W. F. Mapleston, Hammersmith.

YORKSHIRE ENGINE COMPANY (Limited).— Capital 60,000*l.*, in shares of 25*l.* To acquire the property of a company bearing the same name, now in liquidation, and to continue the business of engine-builders and rolling stock manufacturers, machine and tool makers, and general contractors, &c. The subscribers (who take one share each) are—T. Vickers, Cheetham; H. Walker, Sheffield; J. Hall, Sheffield; H. B. Jackson, Manchester; E. Bainbridge, Sheffield; J. Whitehead, Rufford; G. Wood, Manchester.

THE COPPER TRADE.

Messrs. HARRINGTON, HORAN, and Co. (Liverpool, March 14).—Chili copper charters for second half of February were advised on the 3rd instant as 1400 tons fine, of which 650 tons bars and ingots, with 300 tons furnace stuff for England, and 450 tons bars for orders here or Continent. Price of bars was £116·30, and exchange 34⅝d. Chili bar market during the past fortnight has been rather inactive, and although the feeling of speculation has been quite dormant, the trade itself has not been so, as will be seen from the deliveries which are given below. Business in good ordinary brands was done from 55*l.* 10s. spot, and 56*l.* forward, down to 54*l.* 15s. and 55*l.* 7s. 6d. per ton respectively. At these rates market closes steady with a fair enquiry, which sellers are not inclined to meet. The business in furnace material during the same period comprises—At Liverpool: About 305 tons Peruvian ore, and 150 tons Ruby Quebrada ore at 11s. 3d., 110 tons Battle Mountain ore at 11s. 1½d., 170 tons Italian ore (low produce) to arrive here at 10s. 6d., 500 tons Rio Tinto regulus (at Garston) at 10s. 3d., and 135 tons Montana ore (arsenical) at 10s. 1½d. per unit. At Swansea: 100 tons Cape ore at 11s. 3d., and 200 tons of lower produce at 11s. per unit. Precipitate: 240 tons Mason's Spanish at 11s., and 50 tons English at 11s. 7½d. per unit. Import of Chili copper during the past fortnight 2873 tons fine, against 450 tons fine same time last year; delivery 1695 tons fine, against 844 tons fine. Import of other copper during the past fortnight 1836 tons fine, against 990 tons same time last year; delivery 1830 tons fine, against 139 tons fine same time last year. Arrivals here during the fortnight of West Coast S.A. produce:—Britannia (s), from Valparaiso, &c., 700 tons bars, 60 tons ingots; Atlantique (s), from Valparaiso, via Havre, 45 tons ores, 407 tons bars; Oruro, from Pisco, 536 tons ores; Marquis of Worcester, from Lota, 631 tons bars. At Swansea: Emily Waters, from Carrizal, 700 tons regulus; Kappa, from Lota, 760 tons bars. Stocks of copper (Chilian and Bolivian) in first and second hands, likely to be available, we estimate at—

	Ores.	Regulus.	Bars.	Ingots.	Barilla.
Liverpool	—	—	21,495	50	—
Swansea	147	1,318	4,586	—	—
Total	147	1,318	26,081	50	—

Representing about 26,753 tons fine copper, against 25,578 tons Feb. 29; against 25,630 tons March 15, 1883; 25,932 tons March 15, 1882; 32,443 tons March 15, 1881. Stock of copper contained in other foreign ore and Spanish precipitate, 4758 tons fine, against 4174 tons March 15, 1883. Stock of Chili bars and ingots in Havre, 2235 tons fine, against 2845 tons March 15, 1883. Stock of Coro Coro Barilla in Havre, nil, against 14 tons March 15, 1883. Stock of copper other than Chili in Havre, 145 tons fine, against 120 tons March 15, 1883. Stock of Chili copper afloat and chartered for to date, 7157 tons fine, against 10,915 tons March 15, 1883. Stock of foreign copper in London, chiefly Australian, 3600 tons against 4600 tons March 15, 1883.

According to the Board of Trade Returns the total imports and exports into and from this country for the first month of the following years were:—

IMPORTS.	1882.	1883.	1884.
Copper in ores ..... Tons	1,640	2,302	5,099
Copper in regulus and precipitate	4,922	5,574	4,240
Bars, cakes, and ingots	4,430	5,246	6,074
In pyrites, estimated	2,976	2,970	2,817
Total	13,968	16,092	18,230
EXPORTS.			
English copper—wrought and unwrought	4,202	5,722	8,848
Foreign copper—unwrought	1,928	1,217	1,679
Yellow metal	2,518	2,629	2,914
Total	8,648	9,568	11,441

PROVINCIAL STOCK AND SHARE MARKETS.

CORNISH MINE SHARE MARKET.—Mr. S. J. DAVEY, mine share-dealer, Redruth (March 20), writes:—We have again had a good demand for Dolcoath shares this week, and prices further advanced 2, but market has been very quiet for other mines. To-day Dolcoaths close at best, others unchanged. Subjoined are the closing quotations:—Carn Brea, 2¾ to 2¾; Cook's Kitchen, 10 to 12; Dolcoath, 68 to 69; East Pool, 38 to 39; Killifreth, 7s. to 9s.; New Cook's Kitchen, 1¼ to 1¾; New Kitty, 1½ to 1¾; South Condurrow, 8½ to 9; South Crofty, 2 to 3; South Frances, 6¾ to 6¾; Tincroft, 3¼ to 3¾; West Basset, 2¼ to 2¾; West Frances, 7½ to 8; West Kitty, 12¼ to 12½; West Polbreen, ⅞ to 1; West Poldice, ¾ to ⅞; West Seton, 3¾ to 4¼; Wheal Agar, 13 to 13¼; Wheal Basset, 3 to 3½; Wheal Grenville, 5 to 5¼; Wheal Peevor, ½ to 1; Wheal Kitty, ⅜ to ⅝; Wheal Uny, ¼ to ½; Wheal Coates, ¼ to ⅜; Polberro, 1¼ to 1⅜; Trevaunance, 2 to 2½; North Busy, 2s. to 4s.

— Messrs. ABBOTT and WICKETT, stock and share brokers, Redruth (March 20), write:—There has been more activity in the market this week, and a fair enquiry for dividend shares. East Pools and Dolcoaths have improved. Not much doing in progressive mines. Closing quotations herewith:—Camborne Vean, ⅛ to ⅜; Carn Brea, 2¾ to 2¾; Cook's Kitchen, 11 to 12; Dolcoath, 68 to 68½; East Blue Hills, 3s. to 5s.; East Pool, 38 to 38½; Killifreth, ¾ to ⅛; New Cook's Kitchen, 1½ to 2; New Kitty, 1½ to 2; North Busy, 3s. to 5s.; South Crofty, 2 to 3; South Wheal Frances, 6¼ to 6¾; Tincroft, 3¼ to 3½; West Basset, 2¼ to 2½; West Kitty, 12½ to 12¾; West Poldice, ¼ to ⅛; West Frances, 7½ to 8; Wheal Agar, 12⅞ to 13; Wheal Basset, 2¾ to 3¼; Wheal Grenville, 4¾ to 5; Wheal Kitty (St. Agnes), ½ to ¾; Wheal Peevor, ¾ to 1; Wheal Uny, ¾ to ½; South Condurrow, 8¼ to 8¾; West Seton, 4 to 5.

— Mr. M. W. BAWDEN, Liskeard (March 20), writes:—The mining market continues firm, and most shares fully maintain their prices, with a demand for Dolcoath, East Pool, Marke Valley, South Frances, West Basset, West Kitty, and Wheal Agars at an advance. Subjoined are the closing quotations:—Anderton United, ⅛ to ¾; Bedford United, 1¾ to 1⅞; Carn Brea, 2⅛ to 2¾; Cook's Kitchen, 11 to 11¼; Dolcoath, 66½ to 67; Devon Consols, 3 to 3¼; East Caradon, ⅛ to ¼; East Pool, 37 to 37½; Glasgow Caradon, ¼ to ⅜; Gunnislake (Clitters), ⅜ to 1; Hingston Down, 2s. 6d. to 5s.; Killifreth, ⅜ to ½; Marke Valley, ⅜ to ½; Old Gunnislake, ⅛ to ¼; Old Shepherds, 1 to 1¼; Phœnix United, 1 to 1¼; Prince of Wales, ¼ to ⅜; South Caradon (Limited) fully paid, ¾ to ⅞; South Condurrow, 8¾ to 9; St. Just United, 4 to 4¼; South Crofty, 3⅞ to 4; South Devon United, ¼ to ⅜; South Frances, 7 to 7¼, c.p.; Tincroft, 3¼ to 3½; West Basset, 2¼ to 3; West Caradon, ⅛ to ¼; West Frances, 7¾ to 8; West Kitty, 12¼ to 13; West Crebor, ⅛ to ¼; West Phœnix, ⅛ to ¼; Wheal Agar, 12¾ to 13; Wheal Basset, 4 to 4¼; Wheal Crebor, 1½ to 1¾; Wheal Grenville, 5 to 5¼; Wheal Kitty, ⅜ to ¾; Wheal Jane, 5s. to 7s. 6d.; Wheal Uny, ¾ to ⅞.

— Mr. JOHN CARTER, mine sharedealer, Camborne (March 20), writes:—The only feature to notice in the share market is the rise in Dolcoaths to 68½ buyers, and East Pools to 38¾. Subjoined are the closing quotations:—Carn Brea, 2¾ to 2¾; Cook's Kitchen, 10 to 11; Dolcoath, 68 to 69; East Pool, 38¼ to 38¾; Killifreth, 8s. to 10s.; New Cook's Kitchen, 1 to 1¼; New Kitty, 1½ to 1¾; South Condurrow, 8¼ to 9; South Crofty, 2¼ to 2¾; South Frances, 6¼ to 6½; Tincroft, 3¼ to 3¾; West Basset, 2½ to 2¾; West Frances, 7¼ to 7¾; West Kitty, 12¼ to 12¾; West Seton, 3¾ to 4¼; West Poldice, 4s. to 6s.; Wheal Agar, 12¾ to 13¼; Wheal Basset, 3 to 3¾; Wheal Grenville, 4¾ to 5¼; Wheal Kitty, ⅛ to ⅜; Wheal Uny, ⅜ to ½; Wheal Peevor, 1 to 1¼.

MANCHESTER.— Messrs. JOSEPH R. and W. P. BAINES, share-brokers, Queen's Chambers, Market-street (March 20), write:—The genial weather has combined with the course of money to infuse some amount of buoyancy into the markets, but the actual gain in values is not important, the change being noticeable more from the preceding dulness than from marked general improvement. In home railways better figures rule, but the favourable alteration is most noticeable in southern mines. In foreign funds the same record is shown, though there are a few instances in which lower prices are marked, prominent among which are Turks. Argentine bonds are distinctly better. Egyptians show very little change, and what there is being contradictory, Unified having fallen ⅜ to ½, and Daira risen, ⅛; preference are stationary. Argentine Hard Dollar Bonds and Public Work Bonds have risen 1 and ⅛ respectively; Russians, ⅜ to ⅝; Peruvian, ⅜ to ⅛; and Mexican Three per Cent., ⅜; whilst Turkish Registered is 1; ditto stamped, ⅛; and Spanish, ⅜ to ½ lower. Mexican rails return another decreased traffic (10,402*l.*), causing further weakness, and prices, though about 1½ above the lowest of the week show a further decline of nearly 2½. The rally from lowest points appears to be only attributable to temporary speculative operations. Banks and insurances are the only classes of the miscellaneous series in which any fair amount of business has been transacted, and in both these the number of dealings reported is good, and prices ruling exhibit tone of market good. Miscellaneous shares proper, whilst producing only a very moderate list of "business done," show by the changes of quotations a goodly array of enhanced prices (though in no case very important), whilst the instances of decline are very few.

BANKS are brisk and free of sale, full rates, as a rule, being obtained. Quotations are a little irregular; but balance is decidedly in favour of a strong market. Consolidated, which at one time showed turn higher, have gone back to figures same as last week. Buyers in Manchester and County and in Manchester and Liverpool District bid a little more, sellers' figure remaining unaltered. —Higher: National Provincial new, ½; Lancashire and Yorkshire, 1/16 to 3/16; and Oldham Joint Stock, 1/16.—Lower: Parr's Banking, ¼, and Manchester and Salford, ⅛.

INSURANCE shares continue to exhibit improvement in tone, noticeable during the last few weeks. Compared with what was the average previous to the change for the better, the past week's business is very fair, and quotations show no actual depreciation, whilst the following are higher:—Thames and Mersey, ⅜; Lancashire, 3/16; British and Foreign Marine, 3/16; and Queen, ⅛. In Manchester Fires buyers offer at trifle more, and in Royal Liverpool, sellers' price is turn easier.

COAL, IRON, &C., AND MINING.—Market dull, but balance of changes in prices favourable.—Higher: John Browns, 1⅛; Sheepbridge, A, ⅛ to ¾; R. Hornsby and Sons, ¼; Llynvi and Tondu, Ordinary, ⅛; ditto, Preference, ¼; and Tharsis Sulphur, &c., ⅛.—Lower: Staveley, A, ¼ to ¾; West Cumberland, ¼; Panulcillo Copper, ¼; and Ebbw Vale Steel, ⅛ to ¼. Bolckows fully-paid, and 12*l.* paid, unaltered.

COTTON SPINNING, &C.—Market a trifle better in tone, but prices show no change of importance.——TELEGRAPHS unmoved, save Anglo Ordinary ¼ higher, and ditto, Preference, ¼ down.—TELEPHONES.—The only actual change is in Uniteds, which are ⅛ lower.——MISCELLANEOUS.—Better prices marked in several instances, but not of great moment. Union Plate Glass 1 lower.——RAILWAYS.—The continued ease in the money market and the fine weather have helped prices in several instances, and Great Easterns, Great Northern, A, and other heavy lines quote ½ to 1¼ better, but the most marked change is in southern lines, where the passenger service has resulted in a sensible addition to the weekly takings. Canadians are again down ½ to 1 per cent. Trunk traffic giving no strength, recording as it does another decrease; total, 10,413*l.* This of course is against any prospect of immediate improvement. The opening of another port on the St. Lawrence may assist them a little, but competition precludes much if any amelioration of their prospects till trade mends substantially. The indifferent state of the American market tends to cause an indisposition to enter into any bargains, and the aggregate of business is small.

NEWCASTLE-ON-TYNE.—Mr. S. N. CHALLONER, stock and share broker, Grey-street (March 20), writes:—Coal and Iron Shares: Barrow Steel Six per Cent. Pref. remain 9 to 9½: and ordinary 8 sellers; Bolckow 12*l.* paid, 10¼ to 10¾; but fully paid shares are ¼ higher, at 18¾ to 19; C. Cammell and Co. are 68 to 68½; Chillington Iron, 2s. higher, at 17s. to 18s.; Consett Iron, ¼ down, at 20 to 20¼; Darlington Iron 2s., at 20s. to 24s.; Ebbw Vale ¼, at 5¼ to 5⅜; John Abbots are 5 higher, at 50; and John Browns 1¼, at 56¼ to 57½; Palmer A remain 25½ to 25¾; and B, 15 to 15¼; Panulcillo Copper, 4¾ to 5¼; Rio Tinto, 19 to 19¼; Sir W. G. Armstrong-Mitchell are 2 lower, at 121½ to 122 x d.; Tees-side Iron Ordinary, 5s., at 10s. to 15s.; while Ten per Cent. Pref. remain 1½ to 1¾; Tyne Forge, 8¼; West Cumberland are ¼ lower, at 4¼ to 5. Gas and water shares continue firm. Consett Water at 6¼; Hartlepool Gas and Water, A, 9½; B at 8¼ to 8⅜; C, 7¾ to 7⅞; Newcastle Gas at 172; Newcastle Water at 175; Weardale and Sheildon Water Act, 1866, 24; and Act, 1875, 23. Miscellaneous shares are without much change. Byker Bridge are 10 to 10¼; High Gosforth Park at 15 buyers, are a shade firmer: Langdales ½ lower, at 3¼ to 3⅜; Lawes', ordinary, ⅛, at 4¼ to 5¾; Seven per Cent. Preference, ⅛, at 9¾ to ¼; Newcastle Chemicals, ⅛, at 27s. 6d. to 30s.; Sadler and Co. (Limited), at 2 prem. ex div., are ¼ higher; North Eastern Banks remain at 6¼ to 6½; London and Yorkshire Bank, 37s. to 37s. 6d.; Whitby, Redcar, and Middlesborough Railway, 25 to 30.

SCOTCH MINING AND INDUSTRIAL COMPANIES SHARE MARKETS.

STIRLING.—Mr. J. GRANT MACLEAN, stockbroker and ironbroker (March 20), writes:—During the past week there has been a little more business done, owing to the improvement in the weather and the favourable news from Egypt. The easier tendency of the money market has also helped the advance in prices, which is now only restrained by the dulness in trade generally.

In shares of coal, iron, and steel companies there is no particular change to notice. Barrow Steel Pref. are at 9*l.* 1s. 3d.; Bull's Iron, 20s. to 25s.; Cardiff and Swansea, 45s. to 55s.; Chillington, 18s. 9d.; Chapel House Ordinary, 7s. 6d.; Llynvi and Tondu Ordinary, 50s. to 55s.; New Sharliston, Pref., 6 to 6½; and Wigan Coal, 31 to 33.

In shares of copper concerns prices are steady. Tharsis remain at 6*l.* 5s. to 6*l.* 7s. Arizonas have improved from 13s. 9d. to 15s. 6d. Bratsbergs, 32s. to 35s.; Corporation of South Australian, 5s.; Canada Copper, 7s. 3d.; and Lake Superior, 17s. 6d. to 20s.

In shares of home mines prices are steady. The metal markets show no alteration for the better or for the worse. East Botallack wanted. Anderton are at 12s. 6d. to 17s. 6d.; Devon Consols, 60s. to 65s.; East Craven Moor, 1s. 3d.; East Van, 4s. to 6s.; Great Laxey, 10 to 10½; Halkyn, 6s. prem.; Killifreth, 7s. to 9s.; Marke Valley, 4s. to 6s.; Mounts Bays, 4s. to 6s.; North Penstruthal, 1s. 3d.; New Terras, 7s. 6d. to 10s.; North Blue Hills, 9d.; Owen Vean, 11s. 3d.; Old Shepherds, 19s. to 21s.; Parys, 1s. 6d. to 2s. 6d.; Phœnix United, 15s. to 20s.; Sortridge, 5d; South Frances, 6¼ to 6¾; South Penstruthal, 3s. to 5s.; South Crofty, 35s. to 45s.; Tregontrees, 1s. 3d. to 2s. 6d.; Westminster Consols, 22s. 6d.; West Basset, 40s. to 50s.; West Cornwall, 20s.; West Crebor, 1s. to 2s.; West Peevor, 11s.; Wheal Basset, 57s. 6d. to 62s. 6d.; Wheal Crebor, 30s. to 32s. 6d.; Wheal Grenville, 5¼ to 5¾; Wheal Kitty, 11s.; and Wheal Peevor, 15s.

In shares of gold and silver mines the principal business has been in Montanas, which have again touched 3⅛ on favourable reports from the mines; but they close easier at 65s. to 67s. 6d. United Mexicans steady. Richmonds lower. Birdseye Creek are at 17s. 6d.; California, 15s. 6d. to 14s. 6d.; Chontales, 3s. 6d. to 4s. 6d.; Gold Hills, 1s. 3d.; Gold Coast, 3s. 3d.; Guinea Coast, 1s. 6d. to 2s. 6d.; Kohinoor, 5s to 6s.; New Callao, 4s. to 6s.; Organos, 14s. to 16s.; Schwabs Gully Diamond, 8½ to 9½; Silver Peak, 11d.; Victoria, 13s. to 14s.; and West Callao, 5s.

In shares of miscellaneous companies the principal business has been in Noble's Explosives, which declined from 23¾ to 19½, but are now firmer at about 21¼. Diphwy's Casson Slate are at 15s. Home Mines Trust, 13s. 9d. to 15s.; Lawes' Chemicals, 5¾; ditto pref., 10¾; and Newcastle Chemicals, 30s. to 32s. 6d.

EDINBURGH.—Messrs. THOS. MILLER and SONS, stock and share brokers, Princes-street (March 19), write:—An improved tone has been apparent in the market during the past week, and prices of home railway ordinary stocks are nearly all better. In Caledonian and North British the rise is moderate, but in Great North of Scotland it is fully 3 per cent. Union and Clydesdale Banks are both a little lower. Royal, at 217, is 20s. lower. North British and Mercantile Insurance shares have improved 11s. 3d. to 26/16. Oil shares where changed are generally lower. Young's have receded from 10¾ to 10⅛, Westfield from 1*l.* to 11⅛, Uphall from 10½ to 10, Pumpherston from 69s. 6d. to 67s. 6d., Oakbank from 34s. to 33s., Clippen's from 15¾ to 15⅜. Midlothians after falling from 8¾ to 8⅛ have recovered to 8¾. Burntisland have risen from 20 to 20⅛, Broxburn from 26¾ to 27. Arizona Copper at 15s. 6d. are 6d. higher. Noble's Explosives have had a fall (of about 60s.) to 20. Assets have improved from 7⅞ to 8⅛.

IRISH MINING AND MISCELLANEOUS COMPANIES SHARE MARKET.

CORK.—Messrs. J. H. CARROL and SONS, stock and share brokers, South Mall (March 20), write:—Great Southern and Westerns changed hands at 115 to 115¼, and Midlands at 81⅜. Great Northerns, Wicklows, and Waterford and Limericks unchanged. Bandons wanted at 81, and Bantry Extension shares at 10. Bank stock and Provincials unaltered. National were done at 24 9-16ths to 24⅝, Hibernians at 25⅛, and Munsters at 6 7-16ths to 6½. Alliance Gas shares were taken at 18⅞, and Cork Gas remain 7⅞. Levys firm at 6½, and Gouldings at 9. Steamships wanted at 16½, and Packets offered at 11½. Lyons and Co. shares, fully paid, on sale at 6½, and the 4*l.* paid shares at 5½. Lyons and Co. Debentures remain 102 to 102½. Harbour Board Debentures wanted at 102, and Brewery Debentures, buyers, at 95.

GAS SHARES.—The principal business in these shares, according to this evening's report of Messrs. W. L. WEBB and Co., of the Stock Exchange and Finch-lane, has been:—Alliance and Dublin Consumers' Maximum 10 per Cent., 18½; Bombay (Limited), 6¾; Brentford Consolidated, 193; Buenos Ayres New (Limited), 11 1/16 to 11¼; ditto, 6 per Cent. Debentures, 1893, 97½ to 98; Cagliari Gas and Water (Limited), 22¾ to 22⅝; Commercial New Stock, 183½ to 184½; Continental Union (Limited), Original, 34⅜ to 34⅛; ditto New, 1869 and 1872, 23¾ to 23½; European (Limited), 20; ditto New, 14; Gas Light and Coke, A, Ordinary, 200 to 201⅛; ditto, E, 10 per cent. Preference, 221½ to 222½; ditto, F, 5 per cent. Preference, 105 to 106¾; ditto, G. 7½ per cent. Preference, 157; ditto, H, 7 per cent. Maximum, 141 to 143; ditto, J, 10 per cent. Preference, 220 to 221; ditto, 4 per cent. Debenture Stock, 104¾ to 105¼; Imperial Continental, 190 to 192; Monte Video, 16⅝ to 16⅞; Rio de Janeiro (Limited), 25⅞; South Metropolitan, A, 259 to 261; ditto, B, 213¾ to 214½. Gas stocks firm.

INSURANCE SHARES have, according to this evening's report of Messrs. W. L. WEBB and Co., of the Stock Exchange and Finch-lane, been dealt in as follows:—Alliance British and Foreign, 38⅛ to 38¼; British and Foreign Marine (Limited), 21 to 21⅜; City of London Fire (Limited), 1/16 to ⅛; City of London Marine Insurance Corporation ((Limited), ⅛; Commercial Union, 18½ to 18¾; Employers' Liability Assurance Corporation (Limited), 2½; Fire Insurance Association (Limited), 1 3/16 to 1⅞; Guardian Fire and Life, 60¼; Imperial Fire, 137½; Indemnity Marine, 14½ to 14⅝; London and Provincial Fire (Limited), ¼ to 5/16; Merchants' Marine, 1 1/16 to 1⅛; National Marine (Limited), 1 15/16 to 2; North British and Mercantile, 26 to 26¾; ditto New Scrip Certificates, issued at 15*l.* prem., 12*l.* paid, 20½; Ocean Marine, 5¼ to 5½; Standard Fire Office (Limited), ⅞ to 1. Insurances flat.

TRAMWAYS.—The closing prices of this evening, as quoted by Mr. WM. ABBOTT, of Tokenhouse-yard, are given in tabular form in the last page of the Journal.

Meetings of Public Companies.

EBERHARDT MINING COMPANY.

An extraordinary general meeting of shareholders was held at the offices of the company, Angel-court, Throgmorton-street, on Monday,

Mr. E. L. J. RIDSDALE in the chair.

Mr. W. R. WRIGHT (the secretary) read the notice convening the meeting, which stated that the meeting was called for the purpose of submitting for confirmation the resolutions passed at the meeting held on Feb. 28, authorising the borrowing of 20,000*l.* by the issue of debentures.

The CHAIRMAN said: Gentlemen, this is a meeting, as you are aware, for the purpose of confirming the resolutions which were passed at the meeting held on Feb. 28, giving us power to increase the terms from those terms which were put forward at the previous meeting. The first thing I will do will be to propose their confirmation, and after that is passed we will transact the further business of the meeting, which is to take your decision upon the amount subscribed, and to see whether in your judgment you consider that the works of the company should go on with the amount which we have had already offered to us.——Mr. HAMMOND seconded the motion, which was carried unanimously.

The CHAIRMAN: Now, gentlemen, the part of the business that we particularly want your instructions upon to-day is as to whether the directors should be authorised by you to go on and push the developments in the mine with the comparatively limited sum that we have subscribed.

A SHAREHOLDER: May I ask what amount you have in money?——The CHAIRMAN: I am coming to that if you will give me a minute. Captain Drake, you know, told us that it was necessary to have from 15,000*l.* to 20,000*l.*, in order to set up rock-drills and to develope the mine further; and at the first meeting you will recollect I said that a minimum of 12,000*l.* was as little as we, the board, could safely recommend you to allot upon. On the other hand there are a great many of the shareholders who have stated that even to make a beginning would be better than to close down the mine and stop the works entirely—(hear, hear)—and they have not only expressed that opinion, but they have backed it up by offering to subscribe in proportion to their holdings or to a larger extent. Up to this time about 5300*l.* has been subscribed. Besides that we have a balance of about 700*l.* at the bank, and about 1000*l.* due on calls, which may be considered good. Looking at the matter as it stands we, the board, do not like to take upon ourselves the responsibility of making an allotment upon such a small sum as that, even in the way of making a beginning, unless you on the other side should authorise us to do it, because it is a matter of very great responsibility for a body of gentlemen sitting here to advise you to commence a work of this kind with such a small amount of money, and then have to come perhaps in five or six months time, and say—"The amount you have subscribed, gentlemen, is not sufficient, we want more." You might then say—"If that is the case, why did you allot on such a small amount? You have let a small body of people come in and get the mine for next to nothing." You should never have done it. We, therefore, ask you to consider the matter and tell us what policy you think we should adopt. If you think it better that we should go on with this small amount there is a good deal to be said in its favour. In five months we might do a great deal with these rock-drills in the way of finding deposits. If you so decide we should ask you to nominate a director to represent you and to see that that policy is effectually carried out. We do not shirk responsibility, but in a matter of this kind we think it is a serious thing to take money from you, gentlemen, unless we see our way to a very good and adequate return. I wish you to discuss the matter fully and to give us your opinion on it. We have told you in various circulars what we think of the future of the property.

Mr. F. BLADON: I quite agree with you, Sir, that it is an invidious matter for a board of directors to recommend shareholders to take such a special course, but in this case the indications are so distinctly promising that if we can believe the reports of Capt. Drake—and no shareholder can doubt his thorough honesty of purpose—I cannot but think, myself, that if active proceedings are adopted we shall within a very short time come to something which will pay us for the long delay which has taken place in producing any very good results. (Hear, hear.) My own opinion is that if the present terms had been brought forward and assented to at the first of these meetings we might have got more money than has actually been contributed. That, of course, may be a doubtful point, for the present disposition of the market is to look at the black side of everything. It is as difficult to get 100*l.* out of a man now as it is to get 1000*l.* when things are looking brighter. I have taken a great deal of interest in this matter, as the board and a great many of the shareholders know. I have bothered people to subscribe, and the applications I have brought in have been on the distinct understanding that you will allot and keep the matter alive, and thus retain for the shareholders an active value for their present interest. If we do not allot on the sum which has already been obtained one thing is perfectly certain—the mine must be closed—and, as the Chairman will tell you, the shares will become perfectly valueless. We could not get 5000*l.* subscribed again in a short time, at all events, without very great difficulty. You could not bring anything forward as a temptation if the mine is shut up, and if such an event came about it would simply be a question—I will use the term—of dividing the plunder. (Hear, hear.) If the directors allot one or two things will happen; either within a certain time the indications will be so favourable that there will be a rush to subscribe for the debentures—I know that people are waiting for the best terms, and that subscriptions will continue to come in—or if nothing very definite takes place, and the money is expended without productive results, then, having spent the money, we shall have to shut down, as some people desire that we should do now. In that event, what follows? We shall not have lost our money, for I am told that the mine would sell for 20,000*l.* if offered in the public market. If that is so, then our 5000*l.* is as safe here as in the Bank of England. We shall be doing for ourselves what nobody else will do. I should, therefore, recommend the shareholders present to vote unanimously that we shall go on, and so far as those of the absent shareholders who have subscribed are concerned, they will decide that we shall proceed with the amount we have offered. (Hear, hear.) With the view of testing the opinion of the meeting I will move this resolution:—"That the amount of the proposed debentures already applied for—about 5300*l.*, is, in the opinion of this meeting, sufficient under the circumstances to justify an allotment being made, and the directors are requested to allot accordingly, and to continue their efforts to procure further subscriptions; but meanwhile not to suspend the works." (Cheers.)——Admiral STODDART seconded the resolution.

Mr. BAZETT took a different view of the matter, and suggested that a private meeting of 20 or 25 of the largest shareholders should be called to discuss the matter. It might be that a voluntary liquidation and reconstruction of the company would be more desirable. If the larger shareholders decided to go on probably the smaller shareholders would also come in when they saw the amounts subscribed.

The CHAIRMAN said the board were willing to adopt the views of the shareholders whatever they might be; but there was nothing in connection with the company which could not as well be discussed at that meeting as at a private meeting. (Hear, hear.) If the company went into liquidation of course all the works would have to be stopped, and the men discharged, and the consequence would be a heavy outlay to recommence operations. (Hear, hear.)

Mr. HEAVER objected to Mr. Bazett's suggestion, and Mr. BLADON added that several of the shareholders were only waiting to see what terms would be decided upon to come in and subscribe.

The resolution was then put and carried unanimously.

On the motion of Mr. MENZIES, seconded by Admiral STODDART, Mr. Bladon was elected to the board.

Mr. KIMBER (the solicitor) stated that there would be no necessity to appoint a trustee as the debentures would be "to bearer." The security was a perfectly good one, and he intended to subscribe to the extent of double his proportion.

The CHAIRMAN added that if those shareholders who had already applied chose to increase their subscriptions within the next few days they would have a priority of allotment.

The meeting then closed with a vote of thanks to the Chairman and directors.

EAST BLUE HILLS MINE.

A general meeting of shareholders was held at the office, Gracechurch Buildings, Gracechurch-street, on Thursday,

Mr. J. Y. WATSON (the Chairman) presiding.

Mr. C. B. PARRY (the secretary) read the notice calling the meeting.

The CHAIRMAN said: Gentlemen, the accounts we have to present to you to-day show a balance in hand of 658*l.* 5s. 5d., and no liability whatever beyond the current months' cost, as everything, including merchants' bills and royalty, is paid up monthly. We have sold since last meeting 851*l.* 13s. 4d. worth of tin; altogether we have sold tin for 3008*l.*, and had we simply confined our operations to raising tin we might have made a profit, but we have, especially of late, expended a good deal of money in deadwork that we hope ere long will result in increased returns, and a lasting and profitable mine. Our tin, as you are aware, has been got from stopes above the adit of 50 fms., and we have now sunk a shaft from surface to this depth, and are now sinking below it in a lode worth from 15*l.* to 20*l.* per fathom. When this shaft is down 10 fms. below the 50 it will open out, as we are advised, a large body of tin ground under our productive stopes, and in order to do this as quickly as possible, and at the least possible expense, a portable engine will go to work in about a fortnight, and the agents hope to get down to the 60, and below it, without any great increase of cost, and in two or three months' time. We have also cleared the Gompas' adit for one mile in length, and have about 20 fms. to drive towards the dip of the West Kitty lode. Mr. Pike (the purser) is present, and will answer any questions the shareholders may wish to ask, and on the whole we look upon the prospects of the mine as extremely favourable.

Mr. PIKE, in reply to a question, said the tin ground was opening as they went down.

The CHAIRMAN said, in reply to a SHAREHOLDER, that a good deal of exploratory work had been done. If operations had simply been confined to raising tin good profits would have been made. But it would not do to work out the stopes and simply raise tin. The object of the committee had been to lay out a permanent mine.

Mr. WALTER PIKE was glad to say that East Blue Hills was in a very good position. Much had been done in exploring the lode at the deep adit level, and the results had been satisfactory, upwards of 30.0*l.* worth of tin having been sold from above the adit. A new shaft has been made from surface to adit, more than 50 fms., and sunk 3 fms. below the adit, where the lode was worth from 15*l.* to 20*l.*, and proved that the course of tin held in depth. A portable engine now being fixed would enable the shaft to be sunk from 20 to 30 fms. deeper, and if the lode held as at present for the next level the success of the mine was assured,

Mr. ORLANDO WEBB: Is there reason to suppose that, as you go down, the ground would improve?——Mr. PIKE said that the experience of the district led them to believe that such would be the case. The mine could be cheaply worked by a portable engine from North Blue Hills, which would save a large expense. By means of that engine they could go down 30 fms. At the other level the water ran out into the sea.

A SHAREHOLDER asked the probable cost of sinking the 10 fms.——Mr. PIKE: 12*l.* or 14*l.* per fm. I calculate.

A SHAREHOLDER asked whether the cost of the portable engine was included in these accounts?——The CHAIRMAN: There was a small portable engine at North Blue Hills doing nothing, and we have taken it, and we shall pay 2*l.* or 3*l.* per month for it as long as we want it. It will save us hundreds of pounds in the erection of a new engine; but, of course, if we get into a rich course of ore, we shall have to make a permanent outlay for an engine.

A SHAREHOLDER: What is the distance from the West Kitty lode?——The CHAIRMAN: About 20 fms.

Mr. PIKE: We have examined the lode in West Kitty and Wheal Kitty, and it will take about 20 fms. further to drive before we get it, and it will cost about 8*l.* per fathom to drive. This adit was made with the object of cutting that lode.

The CHAIRMAN: We think we have a good mine, irrespective of that.

Mr. PIKE mentioned they had not yet done anything on the Pink lode, but the lode had done well in the neighbouring mines.

Mr. PARRY then read the following report from the agents:—

March 19.—Since your last general meeting, in addition to the further extension of the 30, 40, and adit levels east, a shaft has been sunk through from surface to the adit level some 46 fms. The former workers had partially sunk this shaft to about 20 fms. below the surface, to the intersection of the lode; this portion, however, had to be considerably enlarged, so as to render it available for present use. The sinking of this shaft is being continued on the course of the lode, and is now 3 to 4 fms. below the adit level. In this sinking below the adit the lode has been worth from 15*l.* to 20*l.* per fathom for the length of the shaft, 10 ft. The three stopes now being worked above that level are worth in the aggregate 20*l.* per fathom. Considering the quantity of tin which has been already raised above the adit level, from ground laid open during the short period operations have been prosecuted by the present company, we consider the future prospects of the mine most cheering, and will, we think, result in a profitable undertaking to the adventurers.—S. BENNETTS, W. K. MITCHELL.

The CHAIRMAN then moved that the statement of accounts presented, showing a balance of 653*l.* 5s. 5d. of assets over liabilities, be passed and approved, and circulated among the shareholders, together with the agents' report and the proceedings of the meeting.

Mr. ORLANDO WEBB seconded the motion, which was carried, and the meeting broke up.

NORTH BLUE HILLS MINE.

A general meeting of shareholders was held at the office, Gracechurch Buildings, Gracechurch-street, on Thursday,

Mr. J. Y. WATSON (the Chairman) presiding.

Mr. C. B. PARRY (the secretary) read the notice calling the meeting.

The CHAIRMAN said: Gentlemen, when this mine was started by the present company some months ago a great deal of exploratory work had been accomplished. A lode had been driven upon in the eastern part of the sett, and a cross-cut from it opened out a copper lode on which some work had been done down to the water. We erected an engine to pump out the old shaft where it was reported the former workers had met with ore, but the result did not realise our expectations. Lately operations have been confined to driving on a most promising tin lode, from which large quantities of tin have been raised from near the surface. The agent reports that it produces good tin, although as yet not in paying quantities. As it is parallel and in conjunction with the elvans that produced such rich results in the adjoining mine of Perran St. George there is every inducement to prosecute it further, especially as the funds in hand are sufficient to give it a fair trial. The accounts show a cash balance in hand of 156*l.* 3s. 8d., liabilities *nil*, and this amount will carry us on four or five months without any call upon the shareholders. As the engine here is not required at present it has been removed to East Blue Hills, and that company will pay a small monthly sum for the hire of it. This engine is of course an asset of North Blue Hills beyond the balance in hand.

Mr. PARRY also read the following report from the agent:—

March 19.—In giving an outline of the various operations in this mine and the result thereof I may first state that the adit level on No. 1 tin lode was cleared out, and the end further extended west some 15 to 20 fathoms. The lode in this part of the drivage was in disturbed rock, by means probably of a large fault, and the lode being very unsettled and unproductive, and the driving of the end suspended. The men were then employed in clearing the engine-shaft (some 30 fathoms north of No. 1 tin lode), which was found to be sunk 13 fms. below the adit, where it intersected the copper lode 1½ to 2 ft. wide; this lode was found to contain small quantities of copper, galena, and blende, but not of much value. The dip of this lode is from an elvan course some 10 fms. to the north of it. The shaft was sunk some 9 or 10 ft. deeper on the lode, and the east and west ends further extended some 6 fathoms, without however discovering anything better. The men were then removed to open out further in the adit level, on No. 2 tin lode. This lode has thus far been small in the 9 or 10 fms. opened on it, yet generally containing some tinstuff; in the present end it is from 3 to 6 in. wide, and yielding ½ cwt. of tin to the ton of stuff. Considering the depth of this adit level (13 fms.) it is a promising little lode, and dipping towards both elvan and granite.—S. BENNETTS.

The CHAIRMAN said the committee were somewhat disappointed at the result, but they had money enough to go on with. Of course the committee would not get into debt, nor make any further calls without consulting another meeting.

Mr. WALTER PIKE said the ground was full of lodes, and an immense quantity of mineral had been raised off the old Perran St. George lode, which was a parallel lode. He considered North Blue Hills a promising speculation. Although the tin lode was small it was very rich and had very much improved, and he hoped that in driving on it would still further improve, and if it enlarged a little it would become a big lode. They were disappointed with regard to the

copper lode. He thought that when they drew the water out they would find what they expected; but, as he had said, the copper lode had disappointed them.

The CHAIRMAN: The West Kitty district is a fashionable district just now.

Mr. PIKE: With respect to royalty, we must ask for some remission of dues.

The CHAIRMAN: We may ask. (A laugh.)

Mr. PIKE: Remissions have been granted under the Duchy.

The CHAIRMAN then moved that the accounts be passed and approved, and, together with the agents' report and a copy of the proceedings at the meeting, be printed and circulated amongst the shareholders.——A SHAREHOLDER seconded the motion.

Mr. MCMILLAN asked whether the shares were saleable in the district?——Mr. PIKE: Yes.

The motion was then put and carried, and the meeting broke up.

WEST GODOLPHIN MINING COMPANY.

A general meeting of shareholders was held at the office of the company, Union-court, Old Broad-street, yesterday,

Mr. F. LANE in the chair.

Mr. D. JULYAN (the secretary) read the notice calling the meeting.

The CHAIRMAN said: Gentlemen, we have called you together a little earlier than usual, because many shareholders in West Godolphin are also shareholders in Wheal Grenville, and we thought it would save time to have the two meetings on the same day. It is the principle of the Cost-book System to have regular accounts and three-monthly audits. My opinion is that "Short reckonings make long friends," and, therefore, these accounts, though presented a little earlier, will embrace the full three months, and we shall show you that during the past three months our work has been very satisfactory. During the previous accounts, giving four months' costs and four months' returns, the returns were 19 tons 2 cwts. 1 qr. 17 lbs., or an average of under 5 tons per month. This time we give you returns of over 5½ tons per month, which in itself is satisfactory, although the price returned is 4*l*. 10s. per ton less than the previous quarter, and although our expenses have not been so large the return is a good return, and the prospects are such as I feel sure will warrant us in saying that we are nearly on the point of meeting expenses. Although the ends have not improved at all, still they are all productive, and the prospects at present are better than at any time since we have had the concern. (Hear, hear.) The development work is extended to every point previously reported upon, and all show prospects of satisfactory production. The lode in Hodge's engine-shaft in sinking became split up in branches, and ran away from the main ore body, but during the last 6 ft. sinking they are coming together again, and we hope the next taking down will show a satisfactory improvement in the shaft. The 80 fm. level and the 70 fm. level were scarcely productive of any consequence; but between the 80 and 70, as far as we have gone, we have had a productive lode, and we think, from the change of ground which has taken place, we shall have it as productive as below the 80 fm. level. We are down 9 fms. below the level, and we may expect that our anticipations of having a productive lode at the 92 will be fully realised. Capt. Hodge states that he has unabated confidence in the ultimate success of the property. He always held the opinion that if the 92 was as productive as the 80 we should double our returns; should it be so, we may expect to have good profits for the shareholders. The Pink lode is turning out satisfactorily; at the 92 we expect the Pink lode will form a junction with the south lode. At Bellingham's we also expect to meet ore. Altogether I think our prospects are good, and our position is one to give great satisfaction, and one which we should congratulate ourselves upon as being nearer than hitherto of attaining success in this undertaking. The accounts are made up as close as they can be brought—the returns to March 13, and the costs paid to March 13. (Hear, hear.) The balance in favour of the mine is a satisfactory one—the sum of 233*l*. 10s. 10d. The calls unpaid represent only about 6 per cent. of the amount at last meeting. I think that is also a matter of satisfaction, although I must admit, working as we are so closely, and the committee taking so much upon themselves in lessening the office expenses, the shareholders might as well pay up their calls as near as they possibly can do so. (Hear, hear.) It is by paying cash for the working of the mine that we are able to carry on in an inexpensive manner. I do not know that there is anything else which calls for notice, therefore I move that these accounts, together with the agents' report, be received and adopted.

Mr BELLINGHAM: I have great pleasure in seconding that. I concur in everything which Mr. Lane has said. I think these are the best accounts we have had since the mine has been going. We have never had such a large output. If the price of tin was what it was 12 months ago, we should be shown a very different state of things, and probably might have had a balance to pay to the shareholders.

Mr. MILNER: When do you expect to reach the 92 fm. level.—The CHAIRMAN: In about three months.

Mr. DOBE: What do you propose doing with those who have not paid their shares?——The CHAIRMAN said some of the shares had been forfeited. The committee called upon a gentleman in arrears to pay up the amount of the calls, which were small in amount. This was a mutual concern where the committee were working hard, and at but little cost to the shareholders so far as office expenses were concerned, and he certainly did think the shareholders should pay their calls punctually. (Hear, hear.) They were now approaching some very interesting points, and if anyone of them turned out successfully it would show a very great difference in the returns and in the state of the mine generally.

Mr. DOBE: There are about 600 shares on which the calls are unpaid, and I think we should give the holders notice to pay. (Hear, hear.)

Mr. BELLINGHAM: I am glad to hear you say so; it will give us ground for informing them that their shares will be forfeited.

The resolution for the adoption of the accounts and agents' report was then put and carried.

The CHAIRMAN said he might mention that this company's tin realised the best price of any tin in Cornwall. The 80 had scarcely ever opened without tin. It was found that all the tin made in the bottom of the level. The inference was that it was still opening out well, and that they would find it a good lode to the 92. He considered they were working on the top of the bunch. The 80 was now producing nearly all the tin they were selling, which was an indication that lower down they would get better results. But if the mine was to be carried on funds must be provided. They were sinking a shaft which cost 35*l*. per fathom for sinking, and pitwork must be provided. They had no reserves in the mine, and they must not expect to continue increasing the returns until they got to the next level. Therefore, they wanted more funds. A call of 1s. per share would enable them to carry on for the next three months, and would leave a balance to provide for any pitwork required. The capital account was only about 14,000*l*., and the returns had been very favourable up to the present time, especially when they considered the low price of tin, and, of course, any little improvement in the price of tin would place the company in a very different position. He moved a call of one shilling per share, payable at the bankers of the company—Messrs. Williams, Williams, and Grylls—on Monday, April 21, discount at 5 per cent. to be allowed on all calls paid on or before that date.

Mr. WILSON seconded the motion, which was carried.

Mr. DOBE moved that after the next general meeting a special general be held to forfeit the shares in arrear to that date.

Mr. W. H. BUMPUS seconded the motion, which was carried.

The CHAIRMAN: Those who work so hard for us should receive our thanks. I propose a vote of thanks to Capt. Hodge, the manager, and the agents of the mine for the excellent and economical way in which they had carried on the operations during the past six months. They are working hard and well for us. The men also have met us in a very good spirit. We have talked about a reduction of wages, and we have submitted with the intention of doing the best they can.——Capt. BELLINGHAM seconded the motion, which was carried.

A vote of thanks to the Chairman and committee closed the proceedings.

WHEAL GRENVILLE MINING COMPANY.

The ordinary general meeting of shareholders was held at the offices of the company, Union-court, Old Broad-street, yesterday,

Mr. F. G. LANE in the chair.

The notice convening the meeting and the minutes of the preceding meeting were read and confirmed. The reports of the committee and of the agent, and the statement of accounts, were taken as read. The accounts for the four months to March 14 showed a balance of assets over liabilities of 1391*l*. 13s. 11d. The labour costs were 3683*l*. 17s. 8d., the merchants' bills 726*l*. 17s. 11d., and the coal account 884*l*. 1s. 11d. The tin sales (119 tons 19 cwts. 1 qr. 12 lbs.) realised 5997*l*. 5s. 5d.

The CHAIRMAN said: I have to express my regret that our Chairman (Mr. Goold) is unable to be present owing to illness. I hope he will soon recover from that indisposition, and that he will shortly be amongst us again. (Hear, hear.) You will have received the statement of accounts and the report, and I hope you will approve of the form in which they are now brought before you. Hitherto it has been our custom rather to draw upon our resources, and to credit in the accouts a fortnight's tin behind the costs. Our financial position is such now that we are enabled to bring our costs up close to the date of the sale of tin. We show you a satisfactory state of affairs, and I trust that we shall continue to show you equal results in the future as we have shown in the past quarter. I should like just to draw your attention to the state of affairs a few years ago. When Captain Hodge took the management of this mine, he informed us that it was necessary, for its permanent productiveness, that we should erect more powerful machinery. In 1877 we agreed to Capt. Hodge's proposal for erecting a large engine upon the western shaft, now called Goold's shaft. The engine was finished in March, 1878. Since then we have erected one 30 in. stamp-engine, one 24 in. drawing-engine, a 14 horse-power engine, with stone-breaker, a similar compressor-engine, 210 fms. of pitwork, with rods, plates, and bobs completely fitted; a calciner, with tin-house and tin-yard complete; three boilers of 11 tons each have been added, three stamp-axles erected, 44 buddles fixed, and 183 frames for tin sluicing have been laid down. Goold's engine-shaft has been cut down and made secure, 140 fms. deep, and further sunk 65 fms., to the present depth of 205 fms. We have driven 1050 fms. or nearly 1¼ mile, in levels on the flat lode, and we have laid 750 fms of tram rails, most of which are iron. This has been done with a capital expenditure of about 13,000*l*. The actual calls made have amounted to 13,650*l*., or 2*l*. 5s 6d. per share; but, inasmuch as a discount of 5 per cent. has been allowed on prompt payment of calls, I do not think the company has received much more than 13,000*l*. Capt. Hodge reported to the committee, when he took possession as manager, that the mine only required proper machinery and development to make her a permanent, productive, and paying concern. How has that prophecy been fulfilled? We have sold the following amounts of tin—In 1879 we sold 230 tons, at an average price of 41*l*. 14s. per ton, realising 9812*l*.; in 1880, 323 tons, at 57*l*. 8s., realising 17,830*l*.; in 1881, 357 tons, at 59*l*., realising 21,063*l*.; in 1882, 259 tons, at 62*l*. 14s., realising 22,576*l*.; and in the past year, 372 tons, at 55*l*. 9s., realising 20,651*l*. In 1881 we commenced paying dividends. We have since returned you 30s. per share, which has paid you a very good interest upon the amount we have called up from you. We are able to tell you that our dividend will be continued, even at the present price of tin, and we intend, with your permission, to increase our reserve fund, as we have another property which must not be overlooked. Wheal Grenville will do well in inself, but East Grenville Mine must be worked also. The committee have endeavoured to propose a plan for working East Grenville; but the times will not allow us to form another company, nor could we call upon you for the money to work the property. Our financial position is as it has never been before, and we propose to ask you to allow us to accumulate a reserve, so that by-and-bye we may be able to erect the machinery necessary to work the eastern portion of our ground. Capt. Hodge has always said that East Grenville is a property that should be worked, and that it will give us good profits if worked with energy. He made the same remark of Wheal Grenville, and it has turned out fully equal to his anticipations. I think, therefore, that we ought to have confidence in him, and that you should not ask us to divide more than we shall propose. We are now raising tin at the rate of 400 tons a-year, as against 372 tons last year. The last price was only 50*l*. per ton, against an average of 55*l*. 9s. in 1883, and 56*l*. 10s. in the corresponding quarter of last year. I think with these figures before you you will see that our position is a very satisfactory one. (Hear, hear.) We can raise our tin and put it upon the market for under 40*l*. a ton, so that at 50*l*. we realise a profit of 10*l*. a ton, and if we get anything above that you can calculate the extra profit that we shall have. As regards the position of the mine it has not gone back, but we are rather increasing our reserves. Between 1879 and the present time we have nearly doubled the amount of tinstuff raised, and the stuff has shown a very excellent average. We cannot with our present appliances raise much more stuff, but there is the chance that it may improve in quality, and there is the hope that the price will rise. Our costs have now been reduced to a minimum. We are now driving eight ends, and we are laying open a very large quantity of ground, more than we take away, which is a matter for satisfaction. (Hear, hear.) Our costs are paid regularly, and everything is charged up as close as possible. The Chairman then moved the adoption of the accounts and report.

Mr. HENRY BELLINGHAM seconded the motion.

The CHAIRMAN, in reply to Mr. WYSE, said that but for the extra costs brought in the profit would have been 1375*l*. instead of 502*l*. East Grenville was very well situated, having for its immediate neighbours South and West Frances and Wheal Grenville, and the levels from Wheal Grenville were going towards East Grenville in rich ground; in fact, Captain Hodge considered East Grenville the better mine of the two. Hereafter the accounts would be made up closely, and presented regularly three times a year.

The motion was carried unanimously.

The CHAIRMAN moved the payment of a dividend of 2s. 6d. per share, which he stated was equal to 20 per cent. on the amount expended under the present management. This would absorb 750*l*., and leave about 640*l*. in hand as a reserve.

Mr. WYSE seconded the motion, which was adopted.

Mr. R. JOLLY proposed a vote of thanks to Captain Hodge and to other officers of the company.——Mr. W. H. BUMPUS seconded the proposition, which was agreed to.

The CHAIRMAN, in reply to a question, said that the price paid for driving and sinking had been lowered, but the men were working well, and were earning full wages. In several mines bargains had been refused, but in Wheal Grenville they had all been accepted.

The meeting closed with a vote of thanks to the Chairman and committee, and of regret at the absence of Mr. Goold.

WEST POLDICE.—At the meeting on Tuesday the accounts showed a loss on the 16 weeks of 1245*l*., and a total debit balance of 2500*l*. A call of 5s. per share was made. The accounts having been passed, the Chairman (Mr. W. Teague) stated that he had applied to the lords for a remission of dues, and he had much satisfaction in reporting that the whole of them had consented to give up the dues during pleasure. The lords were Lady Williams, Lord Falmouth, the lords of St. Day, and Mr. John Charles Williams, of Pengreep. Mr. Whitford, of St. Columb, had greatly interested himself to get the remission from the lords of St. Day, and he was sure they all ought to feel much indebted to him. There was not a single reservation in the case of either of the lords in making this reduction.

SOUTH FRANCES.—At the meeting on Thursday (Mr. Bawden in the chair) the accounts showed a loss on the 16 weeks' working of 1066*l*. 8s., and a total debit balance of 1187*l* 8s. A call of 5s. per share was made. The Chairman said that some years since Wheal Basset resolved upon abandoning the southern part of that mine. It was thought, however, by the neighbouring mines that the result would be serious to all concerned from the influx of water. The result was, that the engine was kept at work, West Frances agreeing to pay 10*l*. per month, and West Basset two-fifths of the remaining working charges per month. These mines had now intimated that they should not continue the payments.—Mr. Daubuz explained that in 1879 West Basset and West Frances were reluctantly called upon to pay this money. Richard's engine was purchased, the arrangement being that West Frances pay 10*l*. per month, and West Basset two-fifths, and South Frances three-fifths of the remaining charges. At the time South Frances had not cut the flat lode, and although the stoppage of this engine would not have affected them, still they were willing to assist South Frances. Now, after five years, West Basset thought that South Frances should bear the cost. In a few months they would be able, by Marriott's engine, to better cope with the water. They had seen Mr. Bolden, agent to Mr. Basset, and he had suggested a compromise, saying that if West Frances and West Basset would continue the payment perhaps the lords would assist them. A resolution. he (Mr. Danbuz) thought, would support the committee in their conference with the lords. Mr. Henwood thought it was time for the lords to have some consideration for the shareholders. He moved a resolution to the effect that, considering the present low price of tin, and the continuous calls which had been made on the shareholders of that mine, application be made to the lords for a remission of dues, and that the committee be requested to confer with Mr. Bolden in order to come to an equitable arrangement of the cost for keeping the water at Richard's pumping-engine. The resolution was agreed to. Subsequently Captain Craze said that had the water not entered the bottom levels they would that day have shown a considerable profit. Then they had, in addition to the 400*l*. mentioned in the report, spent from 1000*l*. to 1200*l*. in deadwork at Daubuz's. At Daubuz's they had accomplished four-fifths of the work, and he looked for good results in the cutting of the lode in that shaft, and the cutting of the lode he expected, as he had said, in three weeks.

MUNTZ'S METAL COMPANY.—At the meeting on Thursday (Mr. Jaffray in the chair) the Chairman, in moving the adoption of the report, regretted that although they did a considerable amount of trade last year in excess of the ordinary average of their business, the profit was smaller by about 7000*l*. But their experience tallied with that of nearly every other manufacturing industry in the country, that, while there was very little lack of trade, profits were cut down to the smallest possible margin. The keenness of the competition during the past year in their tradk, as in nearly all others, had resulted in lessening their profits by about 7000*l*.; but they had always striven to hold their customers together, and they had done so at some little cost, as was shown by the fact that they had done more business during the past year than in many preceding years. The profit upon the face of the accounts showed a decrease of 7000*l*., but it would be seen that the decrease, strictly speaking, was not so great as that, when he explained the different treatment of the accounts which had been adopted as compared with previous years. That treatment had been forced upon them by the action of the Income Tax Commissioners. After all, admitting that the action of the Income Tax Commissioners was somewhat inconsistent with the arrangements they made with the company some years ago, he believed that that was the soundest principle. The bad debts were a portion of their trade charges, depreciation was a part of their trade charges; and in future what the directors brought forward would be a net result of their trading, and there would no such appropriation of the profits as had been the custom heretofore. They would distribute all the profits, excepting such reserve as it might be prudent to keep to meet any contingency that might arise.

KAPANGA.—SPECIAL REPORT.

Feb. 2: Crushing: In consequence of the Christmas holidays delaying the underground operations the quantity of quartz raised has been less this month than usual. There has been 20 tons of general quartz crushed, yielding 8 ozs., with 12 lbs. weight of good stone, producing 22 ozs., the total yield being 30 ozs. retorted gold, giving a general produce of 1½ oz. per ton.—50 Fathom Level, Scotty's Lode, No. 1 Winze south, South End: This new No. 1 level has been further driven south on the course of the lode 15 ft., the distance from winze being 100 ft.; the lode has continued regular in size, from 8 to 20 in. wide, consisting of the usual good indications, comprising soft sugary quartz, highly mixed with carbonate of lime embedded in the regular kindly flookan, which is thoroughly intermixed with fine mundic. For the past day or two some good stones of quartz showing strong gold has been occasionally obtained. The north end has been driven on course of lode 14 ft., distance north of winze 40 ft.; lode here is precisely of the same character and size as it is seen in the south end.

No. 2 Winze South: This winze has been further sunk on the underlie of the lode 7 ft., depth below the 50 level 22 ft., and stoped south 12 ft. in length; the lode averages 2 ft. wide, consisting of a strong body of mineralised quartz, mixed with arsenic and mundic, at times producing rich specimen stone. In consequence of the lode enlarging to a jointy hard description of quartz the drainage water has found its way from the old Coromandel shaft through the joints of the lode, which has stopped the men from sinking further. I have, therefore, shifted them from this winze to push on the south end new No. 1 level to commence to rise under the winze for stoping out, I should imagine, a good block of ground.—70, Kapanga Lode, No. 8 Level: As this south end is in the hard hanging-wall I found it was advisable, before going further, to test the footwall branch of the lode at a point north of the No. 2 rise, midway between the Nos. 7 and 8 levels. I therefore put the men during the month to open an intermediate level by driving north of the rise on the course of the footwall branch. This level has been driven 30 ft. on the lode, which is in the soft wall, killas country. The lode at this point is split at the top of the enormous horse so often referred to, and is from 6 to 14 in. wide of the best kind of strong quartz, containing the usual minerals indicating gold, and occasionally producing some rich stone, which is the continuation of the gold-bearing ground we have traced down under the 50 south of main winze. After this level gets opened and secured better progress will be made than could be done this month, and the No. 8 end can be driven direct to catch the same run of country below the intermediate level.

No. 7 Level.—The intermediate, above this level, has been stoped in the back 30 ft. long by 6 ft. high; this small branch in stoping disappeared on reaching the hard hanging-wall, its north end having died out, and the south end being cut off by a small slide or clay seam. A little visible gold was frequently seen, but nothing of importance obtained, the compact little branch proving to be a dropper from the hanging-wall.—Machinery, &c.: The winding and pumping engines, with the pitwork, were never in better order, or consuming less coals. All operations are going on steadily, with every dispatch possible, and I am pleased to say the general prospects and indications could scarcely be better for meeting the desired quantity of rich stone so proverbial to this district.—JAMES THOMAS.

AMERICAN RANCHES, AND BRITISH CAPITALISTS.

The principle of developing commercial undertakings with associated capital brought together by the formation of joint-stock companies has not only facilitated the carrying out of enterprises, the magnitude of which placed them beyond the reach of individuals of ordinary financial resources, but has enabled the capitalist of one country to secure a proportion of the profits obtainable from carrying on a given business in another. American railways have long been in great favour with a large section of British capitalists, and on the whole the results of the investments have been very satisfactory. More recently cattle ranche and land companies have been given a large amount of attention, and as there now are half-a-dozen concerns of this class quoted on the Scotch markets which are yielding from 10 to over 20 per cent. dividends it would certainly appear that they offer a lucrative field for investment. The Arkansas Land and Cattle Company, the Cattle Ranche and Land Company, and the Powder River Cattle Company each distributed 10 per cent. as their last dividend, whilst the Texas Land and Cattle Company paid 12½ per cent., the Western Land and Cattle Company 15 per cent., and the Prairie Cattle Company 20½ per cent. as their last dividends. Indeed all that seems necessary to ensure success with is that the purchase of the land and stock should be made at the actual spot market price of the day, and that the management should be straightforward, intelligent, and energetic.

The latest undertaking of this class brought to the notice of capitalists is the Texas Freehold Land, Colonisation. and Cattle Breeding Company, which has been formed with a capital of 250,000*l*., in shares of 5*l*. each, to purchase at a valuation, which amounts to about 117,000*l*., some 76,000 acres of land, and nearly 10,000 head of cattle to begin with, and generally to purchase freehold land and other properties in Texas and other parts of the United States of America situated conveniently to markets and railroads, and possessing facilities for the cultivation of various crops; pending their realisation, it is proposed to take advantage of the profits attached to stock raising by conducting them as cattle ranches. It is anticipated that large profits will eventually result from the re-sale of such properties, land in Texas having greatly increased in value in the last few years. The acreage above referred to embraces two estates, and the purchases being at present provisional, only one or both of the estates may be taken at discretion. The first is a well-established ranche on the Frio river, in the county of Frio, Texas consisting of over 400,000 acres of freehold grazing and agricultural, land, all of which is enclosed by fence, and subdivided into seven separate pastures, together with dwelling-houses, stables, corrals, branding pens, and the necessary improvements for successfully working the property. The estate is near the rising city of San Antonio, which has a population of about 35,000, and a railway station at the growing town of Pearsall, 5½ miles distant, which places it in direct communication with the whole railway system of America. Water is abundantly supplied by two large rivers which flow through the land some 12 miles, besides which there are springs and smaller streams, affording water to all portions of the ranche. The soil is rich, and will grow cotton, corn, oats, vegetables, and fruit. The cattle now on the property comprise nearly 4500 head of graded animals, including short-horn, Hereford, and other improved bulls. There are also the necessary horses for conducting the business.

The second estate is somewhat smaller; it is a large agricultural and grazing ranche, consisting of about 36,000 acres of freehold land, situated in one of the healthiest districts of Western Texas, including the famous Blue Mountain district, which is noted for producing fat cattle. The whole estate is enclosed by a strong barbed wire, rail, and stone-wall fence. Two fine rivers, besides smaller streams and springs, run through the property, affording abundance of water. This estate has been in successful operation for some years, and is equally well adapted for both stock breeding or agriculture; the soil being very rich and easily cultivated, will grow all kinds of cereals, fruits, and vegetables. About 5000 head of cattle are now on the property, with the necessary bulls and horses, and about 1000 hogs are kept to consume the mast or nuts that fall from the trees.

The property is about 20 miles from the town of Mason, and 45 miles from Fredericksburg, and a railroad is surveyed to run within 15 miles. This land is nearly 2000 ft. above the level of the sea, thus making the climate exceedingly healthy, and well adapted to colonisation. Admirable buildings, consisting of large stone dwelling-houses, stables, corrals, &c., are now on the property. The grasses on both these estates consist of the long and curly Mesquite and the varieties of Texan grasses, which are celebrated for keeping cattle fat all the year round. And there is abundance of fine timber for building and fencing purposes. The whole of the 9500 cattle on these ranches will be counted on delivery to the company, and payment only made on the number actually branded on delivery. Several adjoining properties, making altogether about 100,000 to 150,000 acres, it is stated, can be purchased on advantageous terms, and the vendor has agreed to use his influence to assist the directors in acquiring the same if desirable.

It has been pointed out that the essentials for success are judicious purchases and competent management, and the company's prospectus gives full details with regard to both these matters. It is explained that Mr. Francis Clutton, whose practical knowledge (the result of 12 years' experience of Land and Cattle Ranching in the United States) renders him eminently qualified for the purpose, has, on behalf of the directors, personally inspected and valued the properties acquired by this company, and has confirmed the vendor's description in every particular. Mr. Clutton's competency and experience in the valuation of ranche properties is confirmed by two eminent firms of land agents and other gentlemen of high standing in London.

The properties, which as already stated comprise about 76,000 acres of freehold land, buildings, fences, and improvements, together with about 9500 head of cattle, are acquired by the company on the exact terms of Mr. Clutton's valuation on behalf of the company—18s. 9d. per acre for the land with all improvements as stated above, and 4*l*. 15s. 10d. per head for the cattle, payable as follows;—15,000*l*. in fully paid-up shares, 48,000*l*. on delivery and verification of titles, and the balance in payments extending over three years. The arrangements for securing good management appear equally satisfactory since the prospectus states that negociations have been entered into with a thoroughly competent resident general manager, who is a gentleman of many years' experience in all matters relative to stock and land in Australia and the Western States of America. The directors have satisfied themselves that this gentleman is thoroughly qualified for the position, and he has agreed that his salary shall be largely dependent upon the net profits of the company.

GREAT WEST SHEPHERDS are called 1-16th to 3-16ths prem., with an active demand. The applications received have it seems exceeded expectations. A further advance is thought certain, as when letters of allotment and regret are posted it will be found that there is a decided scarcity of the shares. This is known to be a very rich portion of ground, as seven well known lodes traverse the sett, the majority of which have been proved rich at shallow depths.

IRON AND MANGANIFEROUS ORE.—Messrs. H. BORNER and Co. (Cardiff, March 19) write:—There is no change to report in the ore trade since our last report. Imports continue considerable, but ruling prices are unremunerative. Porman or Carthenga manganiferous ore is quoted 16s 3d. c.i.f Cardiff or Newport, and 16s. 6d. to 17s. at North Country ports, with usual guarantee of iron, manganese, and silica. Bilbao (rubio) ore is quoted 11s. 3d. c.i.f. Cardiff or Newport, 11s. 9d. Swansea, 12s. Tyne. Freights from Bilbao still rule low, and the number of steamers seeking employment is large. Imports of ore to Cardiff last week were 9834 tons, and to Newport 14,623 tons.

OLD SHEPHERDS show an advance of 1-16th on the week, being now quoted 1 1-16th to 1 3-16ths. Now that the success of Great West Shepherds is assured it will, it is said, besides adding considerably to Old Shepherds capital account, enable a substantial dividend to be paid to the shareholders. This alone, it is observed, warrants a much higher price; and, judging by the hard appearance of the market, there is strong evidence that this advance has fairly set in.

FOREIGN MINES.

ALAMILLOS.—March 12: In 20 driving west of San Martin's shaft the granite is hard for driving through the lode yielding 1½ ton per fathom. The lode in the 20 driving west of Santa Agueda's shaft is producing good lumps of lead valued at ½ ton in 1 fm. In the 50 driving west of San Felipe's shaft the lode is unproductive. The lode in the 85 driving east of San Enrique's shaft has improved in value to ¾ ton per fathom. In the 130 driving east of Taylor's engine-shaft there are a few spots of lead in the lode. The lode in the 130 driving west of Taylor's engine-shaft is not producing lead. In the 115 driving in the same direction the lode has improved to ⅓ ton per fathom in value. The 80 driving east of San Victor's shaft is still going through a very productive lode, yielding 2 tons in a fathom. The lode in the 70 driving west of Judd's shaft is small, and the rock is expensive for driving through. In Cantero's winze sinking below the 50 the lode does not contain lead to value. Serafin's winze sinking below the 50 has reached the depth for a 60 fm. level. The lode in Roda's winze sinking below the 60 is producing stones of lead valued at ½ ton per fathom. The lode in Antero's winze sinking below the 50 has improved in value to 1 ton per fathom in the past week.

BALAGHAT GOLD.—T. Bray, Feb. 6: During the past week the new engine-shaft has been sunk 3 ft.; total depth, 182 ft.; the reef is about 2 ft. thick at present, showing visible gold in the stone, with good prospects in the dish. The winze has been sunk 3 ft.; total depth, 52 ft.; the reef at present is not quite so thick in the bottom, and the prospects are not showing quite as well this hauling. Have hauled to the surface 12 tons, making a total of 140 tons. The cross-cut at the 105 has been extended 1 ft.; total, 7 ft. In the air shaft at the 100 the winze has been sunk 10 ft. in good looking stone with improving prospects. Prospecting shaft south has been sunk 11 ft.; total depth, 41 ft.; expect to strike the reef soon.—Surface work is going on as well as I can expect, everything being pushed on as quickly as possible.

BALAGHAT GOLD.—Thomas Bray, Feb. 13: During the past week the new engine-shaft has been sunk a further depth of 2 ft. 6 in.; total depth, 184 ft. 6 in.; a little more would have been sunk, but have to cut hitches for timbering the shaft, which occupied part of the time. No quartz has been raised, as we are sinking in the footwall to fix cistern; 4 ft. more has to be sunk and the shaft timbered before we start driving to the stopes. The winze has been sunk 1 ft.; total depth 53 ft., and stoping out as usual, showing some very rich stone; on the whole a very good average, say, 3 to 4 oz. stuff. Hauled to surface 8 tons, making a total of 148 tons. Cross-cut at the 105 I have stopped, as the ground is hard for driving. Prospecting shaft south has been sunk 14 ft.; total 55 ft. Have struck the reef about 1 ft. thick, showing a little gold in the dish; this I shall stop also. In the air shaft at the 100 the winze has been sunk 6 ft.; total depth 16 ft. This ought to be pushed ahead, although it is low grade stuff it has been improving, and it is easy to work.—Surface Works: I wrote to Mr. Reid to forward the timber as quickly as possible. We started the boiler from the Colar Mine on Monday. Yesterday we got a breakdown, but I hope to get it on the mine to-day.

BELT COPPER.—A. Brand, Feb. 26: My last letter to you is dated Feb. 12, since which date I have to report as follows:—Champion rise in No. 2 shaft from adit to surface continues to show good stamp work with some little barrel work. Distance risen from January, 19 ft. 1 in. I calculate that the distance from back of rise to surface is between 12 ft. and 15 ft. This rise throughout from where we started in adit has made an excellent showing of copper. The drill stoping, as mentioned in my report of the 4th, being unable to work through the amount of broken rock, has now been changed to the other side of the shaft, and is stoping in the amygdaloidal part of the vein and breaking good stamp rock. In first level east we continued the cross-cut mentioned in my report of the 4th 33 ft. in all till we struck the footwall of the vein. From a point near the centre of this 33 ft. we started to drift back 12 ft. west into the level. The vein here is very much contorted and twisted, more so than I have yet seen it in any other part of the vein; it appears now to have been thrown back to very nearly its original strike. The second level east was driven 25 ft. 10 in. in February showing some fair stamp work throughout. In the stope in No. 1 stope west the drill has been working steadily and turning out not only good stamp work, but some heavy barrel work and small masses. In the stope in No. 2 level west, which in future we will call No. 2 stope west, we have been breaking rock of a similar nature to that in No. 1 stope west. We have hoisted very little during this month, owing to the fact that we have been putting in a new skip-road, and which turned out to be a more serious job than we calculated owing to the former unevenness of the shaft. At present all our drifts and stopes are piled with trade. Our rock house and rock breakers are almost completed, and next week I trust that we shall be able to hoist directly from the shaft into the rock house. Knowlton shaft has been sunk 27 ft. 2 in. in February, as compared with 16 ft. 4 in. in January, and still shows stamp work, but no barrel work, and is not so good as formerly. An intrusion of trap has come in from the north forcing the vein into the footwall, and we are now following it.

Knowlton Level: This level has been driven 35 ft. 3 in. in the month of February and now shows better in stamp work than it had done for the last 100 ft., the copper being heavier, and more of it. Wolseley shaft is now down 90 ft., of which 32 ft. 9 in. have been sunk in February, as compared with 22 ft. 3 in. in January. It is still turning out good stamp work but no barrel work.—Mill: As I cabled you this morning the mill has been running altogether 72 hours; we then shut down to make alterations in washers, and complete the trestle-work leading to the large ore-bin. On Feb. 21 we again got under way, and have been stamping steadily since on rock taken from the burrow broken in our openings. As mentioned in my cable this is the worst part of the burrow for the reason that the top part of the burrow is just as the rock was broken in the mine; the lower part will be much better, owing to the fact that the heavier pieces of trap had been picked out of it. When our cars are dumped over the burrow the heavier pieces naturally fall to the bottom, and the lighter remain behind. My reason for taking this rock was twofold. Firstly, because the rock was fine, and the rock-breakers, not being yet at work, we required fine rock which could only have been obtained by a tremendous amount of sledging. Secondly, because being above the level of the cars we could load it much easier. And again, you wished a sample of the worst part of the burrow. We are now preparing to stamp 100 tons from the best part of the old burrow; I refer to rock raised by the former company. The railroad and everything look well. Yesterday we increased our power on the stamp-head for a short time, and having previously weighed on amount of rock we found that with 75 lbs. of steam we could crush 170 tons. This steam-power by the selection of wood until our third boiler is in place can be raised to 90 or 95 lbs., and I have no doubt that with from 90 to 95 lbs. of steam we could crush from 190 tons to something over 200 tons per day. Nothing further to report.

BEATSBERG COPPER.—Z. W. Daw, John Daw, jun., March 11: The No. 2 adit driving west, lode 2½ ft. wide, yielding 13*l.* worth of ore per fathom. The two rises in back of this level are worth 14*l.* and 10*l.* per fathom respectively. We have 12 stopes working in the back, yielding on an average 12*l.* per fathom each. We have started a winze in bottom of No. 2 adit to communicate with the No. 3; the lode is 3 ft. wide, and worth 15*l.* per fathom. This six stopes working in bottom of No. 2 adit will produce on an average 13*l.* worth of copper ore per fm. No. 3 adit end has considerably improved, lode 3 ft. wide, worth 14*l.* per fathom. The three stopes working in back of this level will yield 13*l.* worth of copper ore per fathom each.—Daw's Section: End driving west, lode 2 ft. wide, and will produce 9*l.* worth of copper ore per fathom. The three stopes working here are worth 12*l.* per fathom each.—York's Section: We have drained this part of the mine and put men to drive the 25 both east and west. The eastern level is within 5 fms. of the 25, west of Murchison's shaft, lode 3 ft. wide, worth 12*l.* per fathom. We expect to effect a communication between York's and Murchison's section before the end of the month, when we shall have a considerable quant'ty of valuable ground available for stoping. The end going west, lode 3 ft. wide, and will produce 14*l.* worth of ore per fathom.—Murchison's Section: The 25 driving west, lode 3 ft. wide, worth 12*l.* per fathom. The four stopes working here are yielding on an average 13*l.* worth of ore per fathom each.—Johannes: We have suspended the main level going east, and put the men to drive same west of cross-cut, lode 5 ft. wide, and very promising. At present we do not put any value on this end. Rise in back, lode 6 ft. wide, worth 12*l.* per fathom. We have three stopes working here, worth respectively 10*l.*, 12*l.*, and 14*l.* per fathom. We have another cargo of ore in Skien awaiting shipment, and hope to secure the Jane Alice for same. Owing to the severity of the weather the steamer on the Bandagsvand has been compelled to lay up. We are at present stocking the dressed ore at Bandagslie ready for immediate shipment down the lake as soon as the communication is again open. The drawing engine at York's shaft is ready, and will be started as soon as the skip-road is completed.

CAPE COPPER.—OOKIEP—Capts. Henwood and Lanksbury, Jan. 31: Nothing of importance has been found in the 105 fm. level, east of new shaft. We have suspended driving for the time, and started a cross-cut northward about 5 fms. east of No. 36 winze, to prove the rock in the direction of the productive ground above. The 92 fm. level No. 17 is worth ⅛ ton copper ore per fathom. The 92 cross-cut north-west of No. 15 level is suspended, and the men are put to drive north from the top of No. 56 winze at this depth. No. 57 winze sinking below the 92 has again fallen off in value; the present bottom produces only occasional stones of copper ore. We have started two cross-cuts in the back of the 92, one west of No. 45 winze, and the other east of No. 51. The object of these drivings is to effect communication between these points, and to improve the ventilation and also to prove the ground; these ends are worth 6 tons of copper ore per fathom each. The 80 cross-cut south-east from the top of No. 43 winze yields 3 tons of copper ore per fm. The 68 cross-cut north from top of No. 55 winze is worth 2 tons of copper ore per fathom. The 26, north-west of new shaft, is worth 1½ ton of copper ore per fathom. The 26, north-east of the same shaft, is unproductive.

SPECTAKEL.—Capts. Henwood and Lanksbury, Jan. 25: The ground in the 36, south-east from incline is generally composed of quartz, but is at present unproductive. This level is being driven in the direction of the productive ground laid open in the level above. The stope in 75 is worth 1½ ton of copper ore per fathom. The stope in bottom of 64 yields 4 tons of copper ore per fm. The ground in the 53 cross-cut, west of flookan course, is still congenial, but having met with a great influx of water we deemed it expedient to temporarily suspend it until we are enabled to cope with the water more effectually. The men have started a new level north of this, driving a few feet behind the end in ground yielding good stones of copper ore. The intermediate level in back of the 53, south of winze, has fallen off in value, now producing 1 ton of copper ore per fathom.

TRIAL MINES.—Capts. Henwood and Lanksbury, Jan. 31: The 40, east of south level has a very promising appearance, and is yielding a little copper ore. The same level west also yields good stones of ore. The sinking of the shaft below the 40 goes on slowly owing to water, but the ground is jointy and favourable for progress. The ground in the winze sinking below the 10 is disseminated with copper ore throughout, but does not yield anything to value. Sufficient depth has been attained in the winze sinking below the 20 for a trial to be extended from the bottom; the men have consequently been put to drive east from winze at the 31 in ground yielding good stones of copper pyrites. Sinking and costeaning have been carried on here during the month in rock containing silicates and spots of copper pyrites. At the depth of about 15 ft. we intersected uncongenial rock, and the men are now stoping to prove if there is any continuation. The ground in the bottom of trial shaft here has improved in appearance and is producing more frequent spots of copper ore. The rock in bottom of trial shaft at this place is composed of hard quartz, with occasional spots of copper ore. Sinking is necessarily slow, owing to the water being very abundant. We purpose shortly commencing to drive under the ground that yielded a little copper ore in the level above.

Returns for January: Ookiep, 1200 tons of 27 per cent.; Spectakel, 144 tons of 42 per cent.—Bills of lading received: 308 tons per Hondeklip, 585 tons per Ianthe, and 588 tons per Tacna.—Arrivals at Port Nolloth: The Eeta and S. T.—Arrivals at Swansea: The Glenudas, Hinda, Talca, and L'Esperance.—Sales of ore: 700 tons at 11s. 3d. per unit, and 200 tons at 11s. per unit.

CHONTALES.—Manager, Feb. 5: During the past month we sunk 19 ft. in the winze going below the main level at Consuelo Mine. There is much water here now to contend with, but which I hope will decrease as the dry season advances. We have made small progress in the San Antonio Mine for want of dynamite, but which has now arrived, and will enable us soon I hope to get through the hard bar of ground referred to in my last letter. No ore crushed for the month. The cost at the mines for January was 237*l.*

DEVALA MOYAR GOLD.—Manager, Feb. 25: At Strathearn reef we have had rather more water to contend with lately, but the pump keeps it down very easily. With Harewood tunnel we have made but slow progress, only 2 ft., as the ground was very hard, and we had some trouble with the coolies. At Salomon's reef we have made fair progress; the lower tunnel, including the open cutting, is now in 278 ft., it is in fair driving ground, and we have driven 8 ft. during the week. I calculate that in 144 ft. more it should strike the reef, and meet the shaft we are sinking. The sinking of the shaft is going on well, and it is now down 80 ft. At 60 ft. above the old tunnel the drive along the course of the reef is in 8 ft.; the reef is widening out, being now about 8½ ft. thick, and it shows good gold. At 140 ft. above the old tunnel I have started in the raise up another drive south on the course of the reef; this drive, which is in 6 ft., also contains good gold at present. On the estate the coffee crop is all in, and amounts to about 35 tons, which with the exception of about 10 tons has been forwarded to the coast.

FLAGSTAFF DISTRICT SILVER.—Mining Captain: My opinion is we are near a large body of ore where we are working in the winze. The ore that will be found may not be as rich as the sample sent you, but this kind of ore always lies in large bodies, and if any is struck you may depend there will be a great body of it. I am driving a cross-cut from the winze in good ground. I will try and keep the work on in the mine until March 1. After that date I will have to close down. It has been snowing here very hard for over three weeks. There was a slide near the west end of the boarding-house on the night of the 19th, but no damage done.

FORTUNA.—March 12: Canada Incosa Mine: The lode in the 70, driving west of San Pedro's shaft, has not yet been found on the west side of the cross-course. In the 90, driving in the same direction, the lode has declined in value in the past week. The lode in the 120, driving east of O'Shea's engine-shaft, consists chiefly of calcareous spar and decomposed granite. In the 100, driving east of Lowndes' shaft, a good length of profitable lode is being opened up at a cheap rate, worth 1 ton per fathom. In Lowndes' shaft, sinking below the 100, the men are getting on moderately with the work, its present value being ½ ton in a fathom.—Los Salidos Mine: In the 175, driving west of Taylor's engine-shaft, the lode is very small, and the granite hard. The lode in the 175, driving east of Taylor's engine-shaft, continues very small. In the 160, driving in the same direction, the lode has improved to 1¼ ton per fathom, and is of a very promising appearance. In the 145, driving east of Taylor's engine-shaft, a great length of valuable lode is being opened up, worth 1¾ ton in a fathom. The lode in the 130, driving east of Taylor's engine-shaft, is changeable, but has now improved to 1 ton in a fathom. Virginia's winze, sinking below the 145, is holed to the 160. The usual quantity of mineral was returned in the past month, during which the stopes did not undergo any change of importance. The works at surface are kept on with care and regularity, and the machinery is in good condition. We estimate the raisings for March (five weeks) at 350 tons. The tributers returned 180 tons of ore in the past month.—San Anton Mines: In the 65 driving east of Henty's engine-shaft the lode is large, open, and promising, yielding ½ ton per fathom. The lode in the 55, driving west of Henty's engine-shaft, is regular and well-defined, producing good stones of ore, valued at ⅛ ton per fathom. The lode in the 45, driving in the same direction, is disarranged by cross course, and consequently unproductive. The lode in the 30, driving east of El Tesoro engine-shaft, is very regular, with good stones of ore. In the 30, driving west of El Tesoro engine-shaft, the lode has improved a little, and will shortly get under some good ore ground. Monte's winze, sinking below the 45, is going down in a strong and regular lode, containing good stones ore, worth ½ ton per fm. The usual quantity of mineral was delivered to the Fortuna Smelting-works in the past month, and the stopes are yielding fairly well at present. The surface works are going on steadily, and the machinery is in good working order. We estimate the raisings for March at 75 tons. The tributers returned 10¾ tons of ore in the past month.

HORNACHOS.—Report for February: The north shaft has been sunk 5 metres; the lode is 1 ft. wide, with a vein yielding 4 cwts. of silver ore per fathom. The main shaft has been sunk 5 metres 80 centimetres during the month. The first level south has been driven 8 metres 30 centimetres, showing only a little blende. The third level south has been driven 14 metres 75 centimetres; the rock has become harder, and the lode yields 8 cwts. of silver ore per fathom. The cross-cut at this level has been extended 3 metres 80 centimetres without intersecting the lode; the rock is harder. The fifth level south has been driven 8 metres 80 centimetres, the lode yielding a little ore. The same level north has been driven 6 metres 45 centimetres, the greater part of which yielded 8 cwts. of silver ore per fathom. The sixth level north has been driven 6 metres 70 centimetres in a lode yielding 20 cwts. of silver ore per fathom, occurring in solid ribs. The same level south was driven 12 metres 80 centimetres, the lode being more mixed, and yielding 4 cwts. of silver ore per fathom. The stoping in the fifth level north has yielded 4 cwts. per fathom, and the lode is expected to improve.

JAVALI.—G. E. Chambers: It is again my pleasant duty to send you a favourable report of the month's workings, accompanied by a good remittance of gold. A change for the better has at last taken place, and I think the company may now anticipate greater prosperity.—Mine: Pim's tunnel was driven 3 varas; the streak of better quality quartz mentioned in my last still continues and is improving. Dolores stope yielded 96 tons of quartz. Nispero stope No. 1 from the east side yielded 136 tons of quartz, which is including 103 tons that came from the old Dolores shaft. Nispero stope No. 1 west yielded 205 tons, and Nispero No. 2 95 tons. Nispero stope No. 3 was continued 1½ vara to the west, and a rise of 2 varas made; likewise a cross-cut to north to meet Nispero stope No. 4, from whence 91 tons of quartz were extracted. San Pedro stope No. 1 yielded 99 tons. San Pedro stope No. 2 was driven 6 varas to east, and 204 tons of quartz were taken from the western side, where we have a very fine stope of fair quality quartz, and a lode about 12 ft. wide, with about 15 fms. backs. I have this month set a contract to take away the pillars of new shaft. Seemann's shaft is now communicated to Pollock's tunnel, and I have commenced a cross-cut to south near the surface, though which I intend to tram away some remaining manto deposits upon the south side. Laken stope gave 90 tons of quartz. Sinking No. 1 was driven 6 varas to west, also a cross-cut to north was made at the foot of sink to try the lode, and at the same time make a larger space for filling the buckets. The plot for the windlass at sinking No. 2 was completed, and the level below driven 6½ varas to the east. The mine, all round is in good condition, and the various workings show as yet no prospect of falling off in value.—Esperanza Mine: The main level here was driven 1⅗ vara; ground still hard and poor.—Mills, La Fe: 30 stamps worked 23½ days, crushing 1947 tons of quartz, which yielded 459 ozs. of gold, making an average per ton of 4 dwts. 19 grs. The new turbine still continues to give great satisfaction, the only difficulty being the rapid wearing away of the wooden pivot. The engineer has his attention occupied in trying to invent some means of lessening this drawback.—La Esperanza: The eight stamps worked 22¾ days, crushing 416 tons of quartz, which yielded 99¾ ozs. of gold, making an average of 4 dwts. 18 grs. per ton.—La Caridad: The two arrastras worked 23½ days, treating about 325 tons of tailings, which yielded 27½ ozs. of gold, making an average of 1 dwt. 16 grs. per ton. The total remittance consists of 585¼ ozs. of gold, and the total average per ton was 4 dwts. 23 grs.—Receipts and Expenditure: The expenditure 940*l.*, and the remittance I have valued at 1465*l.* I have every reason to expect to send you an equally good remittance by next mail.

LINARES.—March 12: Pozo Ancho Mine: The lode in the 135, driving east of Warne's cross-cut, is very open, containing a little ore, but not sufficient to value. The 130, driving west of Warne's engine-shaft, continues to open up valuable ore ground; worth 2 tons per fathom. The lode in the 135, driving west of Peill's engine-shaft, is small and disarranged. In the 135, driving east of Peill's engine-shaft, the lode has improved to ⅓ ton per fathom. The lode in the 120, driving east of Peill's engine-shaft, is compact and regular, and of a promising appearance, yielding 1½ ton per fathom. In the 105, driving east of San Francisco shaft, the lode is small, consisting of quartz and lead ore, valued at ⅓ ton per fathom. In Peill's engine-shaft sinking below the 135 the men are getting on well with this work. No. 252 winze, sinking below the 65, is going down in a promising lode, consisting of calcareous spar and lead ore; worth 2 tons per fathom. No 254 winze, sinking below the 100, is situated west of Warne's engine-shaft, and will ventilate the 115.—Quinientos Mine: In the 115, driving west of Taylor's engine-shaft, the lode is large and strong, yielding a little ore, but not enough to value. The lode in the 115, driving east of Taylor's engine-shaft, is regular and well defined, consisting of carbonate of lime and lead ore; valued at 1 ton per fathom. The 100, driving in the same direction, is opening up a good length of valuable ore ground; worth 3 tons per fathom. The lode in the 90, driving east of Taylor's engine-shaft, is very open, and of a promising appearance, yielding 1 ton per fathom. The lode in the 65, driving east of Judd's shaft, is compact and regular, producing 1 ton per fathom. In Pio's winze, sinking below the 100, the lode is easy for sinking through, and yields good lumps of ore; worth 1 ton per fathom.

MONTANA.—Telegram from Mr. G. Attwood, March 17: Ten stamps, 13 days, 136 tons of ore crushed=3452*l.* bullion value.

NEW POTOSI.—Mr. Provis, March 14: We have been hard at work at Attwood shaft driving the levels since my last. The No. 1 drift is now 44 ft. from the shaft, and I am very pleased to report a great improvement in the quality of the quartz. On Feb. 3 the quartz met with was less vitreous than we have hitherto been breaking from here, and containing blue veins, which is a sure indication of the near presence of gold. After a few blasts fine gold could be plainly seen from almost every stone broken. After driving about 4 ft. we rose 6 ft. above the back of the level so as to prove the continuance of this good rock, and I am pleased to say the lode is quite as good in the rise as it is in the bottom of the level. The No. 2 drift, which is about 60 ft. below this, is now 26 ft. from the shaft. The lode here is about 4 ft. wide; in a short time this will be under the good quartz encountered in the level above. When this point has been reached we shall at once sink a winze from one level to the other, which will open up a section of stoping ground that will supply quartz for the mill for several months.—Air Shaft: Beyond completing the hoisting gear we have done little, the men being required on other works of more immediate importance. We have driven the western level 7½ ft.; the lode is over 2 ft. wide. In the eastern level only a few feet have been driven.—No. 3 Shaft: We have continued sinking the winze below No. 1 level, it is now 33 ft. deep, but the lode is very small at present; this I believe to be only temporary, because the lode in the end, which is 18 ft. further east than the winze, is 2½ ft. wide, and contains rich quartz. The lode in the bottom level, which we cut just before my last letter, kept to about 9 in. wide for 13 ft. driving, but the last foot or two indicates a wider lode ahead. Mr. Provis adds that he came to the conclusion after consulting our agents at the mines that he would be of much greater service to the company on the mines at the end of the season when he could erect the 30 additional heads to the mill, fitting and machine shops, &c., as nothing but underground work will be proceeded with for the next few months. He also thought that detailed particulars of the great improvement in the No. 1 drift, Attwood's shaft, would be of interest to the shareholders.—201 to 225 tons of quartz milled; 126 to 150 ozs. of gold for fortnight; 15 stamps running; 10 days' full work. Mine steadily improving.

PESTARENA.—William Roberts, William Roberts, jun., March 15: No. 1 Lode, Incline Shaft: The lode still maintains its quartzy character, sparsely charged with pyrites, but has the appearance of narrowing in the bottom; its present yield is about 9 tons of ore per fathom, of 7 dwts. per ton. In the 131 end driving north the lode has somewhat widened out, but is more mixed with the country rock, yielding 5 tons per fathom, of 10 dwts. per ton. The 130 end, driving south, carries two separate veins of quartz thinly charged with pyrites, yielding 3 tons per fathom, of 6 dwts. per ton. The 120 cross-cut east not having intersected anything to the east of the vein reported on in the last report will now be suspended, and the men set to put up a rise stope from the 130, 40 metres north of the shaft, to ventilate the bottom of the mine; this rise will go up in a lode that will yield about 4 tons of ore per fathom, of 18 dwts. per ton. In the 110 cross-cut, driving west, the rock is still of a stratified nature, but has become more calcareous and easier for driving, and good progress is being made. The 110 end, driving south, has a small mixed lode 30 centimetres wide in the sole of the level, whilst in the roof it is small; its present yield is 2 tons of ore per fathom, of 18 dwts. per ton. The intermediate drive south above this level carries two veins, which are gradually approaching each other, and no doubt we shall have an improvement here when they meet; its yield at present is 3 tons per fathom, of 12 dwts. per ton.—No. 5 Lode: The 90 end, driving north, is going forth in mineralised rock traversed by veins of quartz, carrying a little pyrites, yielding a little milling ore. In the intermediate drive south from the stope above this level, the lode is a little more mixed with mountain, but still yielding a fair quantity of average ore. The intermediate drive south, above the 80 north has a great width of lode, and is opening out some good stoping ground. In the 65 *fm.* end driving south a hanging-wall has been discovered; but it carries no ore, and the appearance of the rock is not promising. As this end is going off to the east a great deal more than the line of the lode we think a short cross-cut west is necessary, to ascertain if any part of the lode stands in that direction. The 33 *fm.* level driving north has a small band of arsenical pyrites and quartz against the hanging-wall, yielding 2 tons per fathom, or 7 dwts. per ton. The stopes continue to yield much the same quantity of ore as reported on the 3rd. The water in the Anza river is still very little, and the number of mills running is only 12.

— William Roberts, Henry J. Gifford, March 17: Val Toppa: In the No. 1 level end, south on new lode and slide, a narrow lode continues above the slide, but yields no ore to value; the slide still preserves its regular direction and dip. The No. 1 level end, south on branch, west of new lode, shows a small lode of poor quartz in soft micaceous schist. Unlike last month, the vein does not finish in the level, but continues upwards in the back; it yields a little saving work only. In the end south on branch, east from the new lode, at No. 1 level, a strong lode in the bottom continues, with a good show of pyrites; but gets smaller upwards, and is finally cut off by a floor, which traverses the back. The average yield is 8 tons per fathom, of 9 dwts. per ton. The winze on branch, east of new lode, is now sunk about 4 metres, and is in a poor mixed lode, with very little milling ores.

Winze on New Lode at No. 1 Level: This winze is being sunk under the slide, and so far there is a good regular lode, carrying some nice-looking pyrites. There is a good deal of water, but as the ground is soft we hope to prove this point quickly. The present yield is about 6 tons per fathom of 12 dwts. per ton. The cross-cut east under No. 1 level has passed through a vein of bastard quartz, but is still in stiff, close schist. The stopes continue to yield the usual quantity of ore, but in genera it is of rather low quality.

PIERREFITTE.—Manager, March 16: The lode in the south mine has very much improved in value since I sent you my last report. The lode in the north mine is without much change, but we are stoping only in one place, below the No. 1 level, as we are for the moment rather short handed. The various points where we are working in the south mine are worth for silver-lead and zinc ores as follows:—The stope above the adit, north-west of the cross-course, is stoping by four men, yielding 1 ton of lead and 1¼ ton of blende per fathom. The rise on the other side of the cross-course is worth fully 2½ tons of silver-lead ore and a little blende; four men are working here. A stope in the back of the lode, on the same side of the level, by four men, is yielding about 1 ton of lead ore per fathom. Besides the above hands employed at this level we have four miners taking out some mineral left in the foot of the lode, which will pay well. No. 1 stope, below this level, continues to be good, and is worth 4 tons of lead ore per fathom for the width of the lode. There is a little change to note in the north-west intermediate level. We are driving close to the hanging-wall. A few days since we began stoping the lode in the back of this level, and it is now worth 3 tons of silver-lead and 4 tons of zinc ore per fathom. Last Thursday we commenced to drive on the course of the lode in the intermediate south-east level, and we have there now a magnificent lode, worth fully 4 tons of rich silver-lead and some zinc ore per fathom for width of the level. I have great confidence in this part of the mine, and taking it altogether the lode never looked so bright for the future as now. Nothing is doing for the present in the bottom levels for want of men, but I expect to get some miners shortly when I shall resume work there. Little progress is being made in driving the surface level, owing to the rock being so hard. The machinery and cable are in excellent order, and working well. The weather is dry and hot, but we have plenty of water for our purposes. No. 3 floors have been idle during two days last week, as it took that time to change one of the rolls. I expect better ore returns next week than we have been having lately.

QUEBRADA RAILWAY, LAND, AND COPPER.—December: Mineral sent to the coast: Regulus, 490 tons, 20·10 per cent. dry; calcined ore, 158 tons, 12·87 per cent. dry; ore, 2749 tons, 11·15 per cent. dry: total, 3397 tons.—Ore sent to smelting works, 1380 tons, 5·05 per cent. dry. Home arrivals during the month, 3547 tons; sales of ore, 462 tons at 11s. per unit; stock afloat and on wharf at Dec. 31, 8219 tons; stock at the mines at Dec. 31, 1765 tons; local traffic receipts for the month (railway), 966*l.*

RICHMOND CONSOLIDATED.—Cablegram from Eureka, Nevada: Week's run (one furnace), $12,000, from 312 tons of ore; refinery, $14,000 (?).

ROSS UNITED GOLD.—Manager, Hokitika, N.Z., Jan. 28: The main shaft has been sunk a further distance of 10 ft., and timbered, making the total depth to-day 274 ft. from the surface, or 6 ft. lower than the level at which the Cassius level was worked, and allowing for the dip in the ground between the two shafts we expect to cut that layer very shortly. The pumping machinery is working well, keeping the water down with ease. The elevator machinery for the surface workings of the flat claims has been ordered under contract, which provides for the plant being erected and in working order within three months from the date thereof. The extension of the main tail is in the meantime being steadily pushed forward, and is now going through old workings. The drainage tail race, No. 2, into the southern portion of the company's ground, is progressing satisfactorily under contract.

RUBY AND DUNDERBERG CONSOLIDATED.—Feb. 24: Dunderberg: There are 22 tributers at work; no tribute ore shipped during the week.—Home Ticket: The stope above the west drift from the north cross-cut, bottom level, is not looking so well as heretofore; the ore has narrowed to about 18 in., and is also very low grade. The winze at the end of the south drift, bottom level, has been sunk 4 ft.; total 10 ft. The ore in the bottom at present is rather low grade. The ore body in the stope at the end of the south drift, third level, is not so large as it has been, but the quality of the ore continues good. No ore shipped this week; 16 tributers at work.—Lord Byron: The tunnel has been advanced 9 ft. during the week; total 510 ft. The seam of ore reported in my last has proven to be about 1½ feet wide, and seems to be of extra quality; no assay has yet been made. We expect to make the connection with the cave in a few days, when the ore passed through will be prospected further.

— Telegram: 30 tons of ore shipped and 31 tons smelted, realising nett $308. The state of the roads still retards shipments of ore.

ST. JOHN DEL REY.—Telegram from Morro Velho, *viâ* United States:—Produce for the month of February, 12,000 oits.; value, 46500*l.*; yield, 2·3 oits. per ton.—Culaba: 1300 tons stamped; yield, 1·5 oits. per ton.

— Telegram from Morro Velho, dated Rio de Janeiro, March 4:—Produce (eight days), second division of February, 3000 oits.; value, 11562*l.*; yield, 2·0 oits. per ton.

WEST CALLAO.—Manager, Feb. 15; The mill will be ready as soon as I receive the water-pipes, the fly-wheel of an engine, and some other pieces of machinery, which were left in Bolivar, and have not yet been sent up. I am getting on with the new houses, and hope to move everything into them in about ten days. Several of the men are putting up houses at their own expense. The No. 2 adit was driven a distance of 15 ft. during the three weeks of work which the last month contained, and during the first fortnight of this month I have driven 12 ft. further. The quartz continues still of the same good quality as previously advised, but it has been impossible for me to assay, as I have had as much as I can do in erecting the machinery and making out the accounts, &c.

YORKE PENINSULA.—Capt. Anthony, Feb. 5: Kurilla Lode: The lode in the 80, east of Hall's shaft, has fallen off a little since last report, a horse of killas having formed between the south and north parts of the lode; it is, however, still worth 6 tons 16 per cent. ore per fathom. The 80 cross-cut towards Morphett's lode is driving by three men and three boys at 9*l.* 9*s.* per fathom. At the 67, east of Hall's, on the south branch, the lode is worth 2½ tons 16 per cent. ore per fathom. Four men are sinking a winze below the 67 on the main lode to communicate with the ore in the 80, the lode being worth 3 tons 16 per cent. ore per fathom. Two stopes are being worked in the back of this level, by eight men, the lode averaging 3 tons 16 per cent. ore per fathom. At the 55 (in section 398) four men are driving east; the lode, only part of which is being carried, is worth 4 tons 16 per cent. ore per fathom. In the cross-cut driving north of the above level small branches of ore have been met with, but the main lode is not yet reached. The winze below the 55 is being sunk by four men. Twelve men are stoping the back of this level at a fair average yield. At the 45 (in section 398) four men are driving east, the lode, only part of which is being carried, is worth 2½ tons 16 per cent. ore per fathom. The lessened yield here is due to the level carrying only 2½ ft. of the lode instead of 4 ft. as before. Four men are sinking a winze below this level, the lode being worth 4 tons 16 per cent. ore per fathom. Two men are stoping in the back of this drive, which is averaging 3 tons of ore per fathom. At the 35 (in section 398) four men are driving east, and should soon hole to No. 2 hauling-shaft. The lode is worth 2 tons 16 per cent. ore per fathom; but the level does not carry the best part of the lode, which lies further south. At the bottom of the hauling-shaft two men are driving south to cut the south wall of the lode, and have passed through a lode worth about 4 tons 16 per cent. ore per fathom. The 25 (in section 398) on the south branch, is holed to a winze sunk below the 20 on No. 2 branch, south of Gurner's shaft. The men will be put to stope the back of the drive west of the winze, where there is some good ground. Eight men are stoping in the back of this drive at an average yield of 3 tons 16 per cent. ore per fathom, and two men are working on tribute at 10s. in 1*l.* Two men are driving north from the 10 at Gurner's shaft (in 398) towards Morphett's lode. At the 20, west of Gurner's shaft, four men are stoping on daywork. At the 20, on No. 1 branch, south of Gurner's shaft, two men are stoping on daywork. On No. 2 branch four men are stoping, the lodes giving fair average yield. At the 10 two men are on tribute at 10s. in 1*l.*—Morphett's Lode: The 67, east of the tunnel, is driving by four men, the lode being worth 3 tons 16 per cent. ore per fathom. Four men are stoping in the back of this level, the lode being worth 4 tons of 16 per cent. ore per fathom. The men who were in the other stope in this level will be put to sink a winze below the 55 to hole to the back of their stope to render the stoping more convenient. Four men are sinking a winze below the 55, the lode being worth 4 tons of 16 per cent. ore per fathom. This is to lay open stoping ground. Two men are stoping in the 55, the lode giving fair average yield. The winze sinking below the 43 on the north branch is holed, and a stope set, to four men, at 3*l.* per fathom and 2*s.* 6*d.* tribute. At the 43 and 30 six men are working on tribute at an average of 9*s.* 8*d.* in 1*l.* Two men are taking out some arches of ore left in the 30 by the stopers.—Machinery: On the whole the machinery is working well.—Ore Returns: There had been raised during January 400 tons of ore, averaging 14 per cent., and dispatched to London 102 tons of 18½ per cent., leaving on hand at the mine at the 31st of the month 2436 tons, averaging 14 per cent. Opportunities for shipping at cheap freights to England having ceased to offer, tenders were being taken for the sale of ore in the colony.

Mining Correspondence.

BRITISH MINES.

BEDFORD UNITED.—H. Trezise, March 18: Setting Report: North lode: Cross-cut to drive north at the 115, by four men, 4 fms., or cut the lode at 9*l.* per fm. Three tributes pitches set, two at 10s., and one at 12s. in 1*l.*—Bridge Lode: The 62 west to drive by six men, at 5*l.* 5s. per fm.; lode of a promising character, composed of capels, mundic, and ore of good quality. Stope behind the end, by two men, at 1*l.* 16s. per fm., lode worth 3*l.* per fm. No. 2 stope, by two men, at 1*l.* per fm., lode worth 6*l.* per fathom, or 2 tons of ore. The 62 to drive east, by six men, at 6*l.* 10s., lode strong and masterly in appearance. No. 3 stope behind the end, by two men, at 1*l.* 10s., lode worth 6*l.* No. 4 stope, by two men, at 2*l.*, lode worth 6*l.* The 42 east to drive by four men at 3*l.*, lode a good size, but nothing to value. No. 1 stope at the 42 east is worth 6*l.* per fathom, by two men, at 2*l.* per fathom. No 2 stope, by four men, at 3*l.* 10s., lode worth 12*l.*, or 5 tons of ore. No. 3, by two men, at 2*l.* 10s., lode worth 5*l.* per fathom. Nine tribute pitches on this lode, set three at 11s., two at 12s., two at 10s., and two at 8s. in 1*l.* The 30 west to drive by two men at 3*l.* 10s., lode producing saving work.

CATHEDRAL CONSOLS.—S. Davey, S. Davey, jun., March 2: In the 84 cross-cut, driving south, we have gone through a branch, composed of quartz and capels; beyond this the ground is easier for development, and better progress is being made. The lode in the 72, driving east, is 3 ft. wide, composition gossan, producing a little copper. The lode in the 50, driving east, is 1½ ft. wide, composed of quartz and fluor-spar, producing occasional stones of copper. From present appearances we are expecting an improvement daily, as we have passed through the elvan, and are now in a good mineralised granite.

COLLACOMBE CONSOLS.—W. Skewis, March 19: The engine-shaft is down 6¼ fms. below the 96. The lift is fixed and set to work in the western winze, and cleaned up 4 fms. below the 96, and will soon be drained to the bottom. There is no change to notice in any of the other points now in operation.

CREIGIOG.—H. Hotchkiss, March 19: Setting Report: Meadow Shaft: A level to drive west on the Mais-y-Pwll, at the 130, by four men, the month, at 120s. per fathom; lode here is well defined, but rather narrow, at present contains a little blende. A cross-cut to drive south at the 130 is set to four men, the month, at 250s. per fathom. We have a slight change here, which, I trust, is an indication of our near approach to the lode; there is a thin bed of dark brown shale appeared in the foot of the forebreast, the same is rising gradually as we advance, with spots of lead ore in and around this bed.—Eastern Working: To drive east on the Mais-y-Pwll lode below the 60, by four men, at 100s. per fathom; end worth 6 cwts. of lead ore per fathom. We have completed the erection of pit gear, pulley stands, &c., on surface, so that we are now hauling all stuff to land through this shaft with our steam-engine. We are clearing up some of the orestuff which has accumulated on the dressing-floors.

CROOK BURN.—Jacob Craig, March 13: The end of adit level is very similar to what it has been for some time past; 3 or 4 ft. of the bottom is sand and boulder stones, with clay, &c., in the roof.

CWM DWYFOR AND BRYNARIAN (Brynarian Mine).—J. Davies, March 20: In driving the level east from boundary cross-cut towards the old Brynarian workings the ground has changed. There are not so many hard beds. The lode is the same as when last reported.

D'ERESBY MOUNTAIN.—W. Sandoe, March 19: The deep hole which we bored in the New Surface shaft on Saturday did not blow through to the rise in the No. 4, as we expected it would have done. It did slightly crack some of the ground in the rise, but the rise being rather small and the ground hard, we think it best not to waste too much time over it, as is often done in such cases, but to sink on as much as we can till Saturday, when we hope to bore the hole through. The main object is to let down the water, which is tedious to draw with tackle, being now down to a great depth. We are making very fair progress in sinking the shaft below No. 4, and also in the rise roof of No. 6; we are going on very well. At the present rate of rising and sinking we shall communicate in the course of next month. The lode in the rise has improved during the week, and there is a nice orey lode in the bottom of the shaft, in No. 4, very similar to it.

DEVON FRIENDSHIP.—F. R. W. Daw, Wm. Gill, March 20: The 42 end, east of Bennett's shaft, continues to look well for arsenical mundic and tin; the lode is about 2 ft. wide, and worth 16*l.* per fathom. Tancock's stope, in the back of the 42, west of Bennett's shaft, is worth 8*l.* per fathom for arsenical ore. Floyd's stope, in the back of this level, is worth 7*l.* per fathom. The stopes in the back of the 30, west of Bennett's shaft, are worth 8*l.* 10s. per fathom. The rise in the back of the 12 is worth about 4*l.* per fathom for copper ore. Rickard's stope, in the bottom of the adit level east of shaft, is worth 7*l.* 10s. per fathom. We are making good progress in the cross-cut west of Kent's shaft. The calciner and the dressing machinery are working very satisfactorily.

DEVON GREAT CONSOLS.—Isaac Richards, March 23: Monthly Report: Wheal Emma: New Shaft, New South Lode: During the past month the 205 east has been driven 3 fms. 2 ft. 7 in.; the lode (part carried, 4 ft. wide) being composed of capel and quartz, with peach, fluor, some good quality copper ore, and from 2 to 3 tons of mundic per fathom.—Railway Shaft: The Railway shaft has been sunk 2 fms. 1 ft. 3 in., making it 8 fms. 0 ft. 6 in. below the 205, the ground being of a congenial nature for the production of mineral. The 205 west, on the south part of the lode, has been driven 3 fms. 2 ft. 1 in., the portion of the lode carried (2 ft. wide), being composed of capel and quartz, with small quantities of copper and mundic ores. The 160 west, on the south part of the lode, has been driven 8 fms. 0 ft. 8 in., the lode proving from 1½ to 2 ft. wide, and yielding in places some good quality copper and mundic ores; the ground for some distance has been in a somewhat disordered state, and recently a cross-course has been intersected, which has displaced the lode probably to the south, and as soon as the drivage has sufficiently advanced beyond the influence of the cross-course a cross-cut will be put out in that direction for proof of same.—Watson's: At the engine-shaft the trip-plat at the 112 referred to in former reports has been completed, and the 112 east and west has been driven in the former direction 4 ft. 6 in., and in the latter 4 ft. 6 in., the lode proving from 3 to 4 ft. wide, and yielding 2 tons of copper and mundic ores per fathom. The 100, west of engine-shaft, has been driven 2 fms. 1 ft. 3 in., the lode proving 2 ft. wide, and yielding small quantities of copper and mundic ores. The 32, east of the western shaft, has been driven 4 fms. 2 ft., the lode proving from 2 to 4 ft. wide, composed of capel and quartz, with a little copper and mundic ores. The 20, east of the western shaft, has been driven 3 fms. 0 ft. 6 in., the lode proving 2 ft. wide, composed of capel and quartz and small quantities of copper and mundic ores.—Prementer: The adit level has been driven west of the cross-cut 1 fm. 4 ft., the lode proving small and unproductive. This drivage is at present suspended, and the men are placed to open on the lode in the eastern direction, where it is 1½ ft. wide, and yields a little copper and mundic ores.

DEVON GREAT UNITED.—I. Richards, March 20: In the 120 fm. level, east of Willesford's shaft, the lode continues of large size, fully 5 ft. wide, composed of capel and quartz, with peach and some good quality copper and mundic ores. In Pengelly's rise in the back of the 130, west of Willesford's shaft, the lode is 3 ft. wide, of a promising character, and yielding some copper and mundic ores of good quality. In the winze sinking below the 104, west of Willesford's shaft, the lode is 3 ft. wide, and continues to yield for length of winze—9 ft.—6 tons of copper ore per fathom. At the 60, west of Watson's shaft on the middle lode, the drivage for more speedy progress is still being carried by the side of the lode.

EAST CARADON.—Wm. George, March 20: The rails and pipes have been taken out at the 150 on caunter lode, and are being put in the 730 cross-cut with the view of driving on the branches referred to in our last report. The ground in the cross-cut south continues favourable, but there has been no change either there or in the south lode at the 70 to notice.

EAST DARREN.—T. Garland, March 19: In the 92 end, west of cross-cut, we have suspended driving on the north branch, which became small and unproductive. In the 92 end, west on south lode, the lode is 5 ft. wide, composed of blue clay-slate, carbonate of lime, stones of copper, and a good mixture of lead ore, saving work for dressing. In the 80 end, west of stope, the lode is 5 ft. wide, a little improved at present, yielding 10 cwts. of lead ore per fathom. In the stope over the 92 west the lode is 4 ft. wide, yielding 1 ton of lead ore per fathom. In the stope over the 80 west the lode is getting smaller as we near the flat and less productive. At this point we shall prove the lode above the flat. The machinery is in excellent order and surface work progressing satisfactorily towards our next sampling.

EAST WHEAL LOVELL.—R. Quentrall and Son, March 19: South Lode: We have driven through some fathoms of tin ground that can be stoped at a good profit, and the lode is still continuing in the end, but the best of the lode appears to be in the bottom of the level. This lode has every appearance of opening out a productive lode, and we think the machinery on this part of the mine had better be kept.—Sevorgan: We find the lode is more than 20 ft. wide at the 27, and we have just commenced sinking below. The lode is of a very favourable character, and produces a little tin.

FRONGOCH.—J. Kitto and Son, March 15: Since the date of our report presented to the shareholders at their annual meeting, held on the 19th ult., all our operations both underground and on the surface have been continued with the usual regularity, and the results have been similar to those which have characterised our previous work, and described in former reports, it is, therefore, unnecessary at present to speak of each point in detail. We may, however, state in order to keep pace with the requirements of the mine, we have commenced sinking a new shaft from surface in our eastern ground, also a rise above the 14 against it, and hope to effect a communication between those points in about a month from this date, when we shall at once fix a skip-road in this shaft; and as it will be brought down in the centre of our principal course of ore ground, we shall soon be enabled thereby to effect a considerable saving in the tramming and winding of the stuff, and thus work the ground more cheaply than we have hitherto been able to do. Since our last report we have sold 150 tons of blende and 50 tons of lead ores, which have been delivered to the purchasers, and we shall sell during the current month 250 tons of blende.

GAWTON.—G. Rowe, March 15: The lode carried in the 117 east is 5 ft. wide, and looking exceedingly kindly, yielding sulphur and arsenical mundic, with rich quality copper ore. No 1 stope in the back of this level is yielding 5 tons of copper ore and mundic per fathom. No. 2 stope is yielding 10 tons of mundic per fathom. The stope in the bottom of the 105 east is worth 6 tons of mundic per fathom. The lode in No. 1 rise in the back of the 105 east is yielding 4 tons of mundic per fathom. The lode in No. 2 rise in back of the 105 east is 7 ft. wide, and yielding 14 tons of arsenical mundic per fathom, and good stones of copper ore. No. 1 stope in the back of this level is yielding 6 tons of mundic per fathom. The lode in the 95 east is showing an improved appearance, yielding 3 tons of mundic per fathom, mixed with a little copper. The lode in the rise and stope in the back of the 82 west is yielding 7 tons of mundic per fathom. The lode in the 70 west is looking well, and yielding 10 tons of mundic per fathom. Nos. 1 and 2 stopes in the back of the 70 east is yielding 8 and 10 tons of mundic per fathom.

GOGINAN.—J. Kitto and Son, March 15: During the past month we have made very good progress in driving the 70, west of Francis's shaft, which has been extended on the south part of the lode, and throughout the drivage has yielded from 10 to 12 cwts. of silver-lead ore per fathom, which is about the value of the present forebreast. In addition to this the north part of the lode is standing intact for a long distance by the side of the level, and having found a little ore going in that direction, we have near the forebreast cut into it about 3 ft., and find it producing splendid stones of copper and silver-lead ores. We cannot yet say what the ultimate value of this discovery will be as we have only just broken the side, but as far as seen we may safely state that it will yield 1½ ton of very good quality copper ore, and 10 cwts. of silver-lead ore per fathom; and further, the strongest and richest part of the lode is at the furthest point in the cross cut. We have, therefore, suspended the driving west for the present, and put the men to strip down the side to test its value as quickly as possible. There is no change worthy of remark either in the stopes or tribute pitches. We have completed the delivery of the last sale of silver-lead ore, and are now engaged in preparing another parcel for the market.

GOODEVERE.—R. Knott, March 19: The ground in the adit end east has come in somewhat stiffer, consequently our progress during the past week has not been so good as stated in former reports; the distance driven is 1 fm. I hope the ground will soon change again for the better, as at present we are not keeping the stamps fully supplied. The part of the lode carried for near 8 ft. wide is not looking quite so well, but we continue to open up paying ground for stoping. No other change to report.

GORSEDD AND MERLLYN.—W. T. Harris, March 20: In the 70 east the lode is 1½ ft. wide, yielding some splendid stones of lead, a decided improvement upon anything seen within the last 100 yards, and prospects indicate a further and early discovery. The pitch west continues to yield lead in paying quantities same as for some time past.

GREAT HOLWAY.—W. T. Harris, March 20: Roskell's Shaft: The 95 north ground favourable for progress; the lode contains a mixture of lead, and promining for an improvement.—Level Engine-Shaft: The 80 east pitch in the back is producing 10 cwts. lead and 1 ton of blende per fathom. The 60, No. 1 pitch in the back is worth 4½ tons of lead, and 1½ ton blende per fathom. No. 2 pitch is producing 4½ tons lead and 1½ tons blende per fm. No. 3 pitch in the bottom is yielding 12 cwts of lead and 1 ton of blende per fathom. No. 5 pitch in bottom is worth 10 cwts. lead and 2 tons blende per fathom. No. 6 pitch in the back is producing 15 cwts. lead and 1 ton blende per fathom. No. 9 pitch in bottom is yielding 1 ton lead and 1 ton blende per fathom. No. 10 pitch in back is worth 1¾ ton lead and 1 ton of blende per fathom.—Brammock Shaft: No. 1 pitch in bottom of 60 is worth 8 cwts. lead and 1 ton blende per fathom. No. 2 pitch in back is producing 10 cwts. lead and 1½ ton blende per fathom.—Office Shaft: The 60 pitch in back is producing 10 cwts. lead and 1½ ton blende per fathom. Dressing and surface work progressing with usual regularity. Have sold 40 tons lead and a parcel of blende.

GREEN HURTH.—J. Polglase, March 13: The vein in the 44 end north is worth 1 ton per fathom. Nos. 1 and 2 stopes are each worth 1 ton per fathom. No. 3 stope is worth 3 tons per fathom. No. 4 stope, at present poor, is worth 2½ tons per fathom. The stope in back of Standage level is worth 4 tons per fathom. No. 1 vein in the 30, north of heave, is improved; we have broken from the end to-day a lump of lead about 4 cwts., a good vein worth 3 tons of ore per fathom. The east level towards Bodder Mea is being cleared as rapidly as possible with the force employed. Dressing going on in the usual way.

HEALEYFIELD.—J. Trelease, March 15: We have holed to the Derwent level by the cross-cut driven from the Whitwell shaft. We hope to get through to-morrow, but it will take several shifts to square the cross-cut, retimber the roof, &c. In driving this cross-cut we struck several strings of ore, and this strengthens our opinion that we shall have ore in the sills below, especially when we take into consideration that these were met with in the plate. The directors have decided to drive on the first strings cut in sinking the Whitwell shaft to the main vein to prove its value. The string itself in the shaft produced some good lead ore. We send samples out to-day for the 20 tons parcel of ore. Machinery working very satisfactorily.

HINGSTON DOWN.—T. Richards, March 19: In the 52, east of the engine shaft, the lode is of much the same character, containing capel, quartz, mundic, &c., and a little copper ore intermixed. The branches have united, and the lode is showing a more promising appearance than hitherto at this level. The south cross-cut towards the No. 2 lode is extended 10½ ft., and fair progress is being made.

HOLWAY CONSOLS.—March 20: Partridge Shaft: In the 70 level south fair progress is being made; the lode is 2 ft. wide, yielding stones of lead, and composition favourable to an early improvement. The pitch in back of this level continues to produce lead and blende in paying quantities. No other change worthy of remark.

KILLIFRETH.—John Michell, Joseph Tamblyn, March 24: We are forcing on the 70 end west, also the winze sinking below the 50, which is a little in advance of the above end, as fast as possible; the value of each is about the same as reported at the meeting. Our other bargains are also much of the same value. Having cased and divided Hawke's shaft to the 50, our men are now cutting plat, &c., so as to resume driving west of shaft and stope the lode in the back of the said level.

KIT HILL GREAT CONSOLS.—Isaac Richards, March 20: In the Tunnel level the ground continues favourable, and the distance driven during the past week is 2 fms. 3 ft.—North Engine-Shaft: At the north engine-shaft, sinking below the 85, the lode continues of a large size, 6 ft. wide, of an exceedingly promising character, and is yielding a little tin ore. In the 88 fathom level east the lode is from 4 to 5 ft. wide, composed of capel and quartz, with peach, mundic, blende, and a little tin ore. In the 88 fathom level west the lode—part carrying from 4 to 5 ft. wide—is very promising, and also yields a little tin ore. The other points of operation throughout the mine are without important alteration.

LLANGELYNIN.—Owen Evans, March 20: The lode in the south end of No. 2 level is worth about 3 tons of blende per fathom, with an admixture of lead, and is worth for driving about 15s. per fathom. The stope in the back of this level is worth about 25 cwts. per fathom, with good stones of copper. Other parts of the mine same as reported before.

MARKE VALLEY.—W. George, March 20: Wheal Jenkin: Since writing the 25 cross-cut has been cleared and driven further into the capels of the lode 4¼ ft.; the end is still very wet without any further change; the character through which we are driving being precisely similar to that we had in cross-cutting at the 15 before reaching the more productive part of the lode. There is no change in the stopes. The machinery, including the stamps, is all in good working order. The progress made in clearing Salisbury's shaft is equal to our expectation.

NEW TERRAS.—R. Ede, March 20: I find you have a very large sett, quite enough for two extensive mines. Your main operations are on the eastern side. The whole of the works have been planned and laid out in a most praiseworthy manner. All your operations are carried on with a minimum amount of manual labour. From the moment the tinstone is brought to surface until it reaches the tin-house it is brought there by gravitation. The underground works have all been well arranged. The ground in the bottom cross-cut at the engine-shaft is of a beautiful character for the production of tin. Last Saturday being the end of the month I set this end to six men, at 50s. per fathom. The lode in the great stopes is large, and instead of working this at so much in 1*l.*, to be paid to the men, I set the men to break it and load the stuff into wagons, at 5d. per ton. In the shallow adit I have found a series of rich tin branches, and in the deep one we have two rich lodes. From the character and quality of the stone already opened in the mine it will soon be necessary for you to take steps to increase your stamping power very considerably. I find the whole of the machinery working well, and the stamps elicit surprise from all who see them doing their duty.

NEW TRUMPET CONSOLS.—R. Quentrall and Son, March 20: There is no particular change in Trenethick shaft, sinking below the 28, or in the 28, driving east, since the last report, but we are much pleased to say that we have communicated the winze below the 16 west with the rise above the 28, and we have had a good lode both in the winze and rise since last report. This has rendered available a section of valuable stoping ground. We are now driving the 28, west of the winze, where the lode is worth 10*l.* per fathom, and is of a very promising character. The lode in the 16 west continues to be worth 8*l.* per fathom, and the ground is more favourable for driving. Altogether are prospects are improving.

MELLANEAR COPPER.—J. Gilbert, March 19: The different points of operation in the mine are looking just the same as when reported on last week. Next Saturday is our pay and setting, when we shall send you our usual monthly report. Our sampling for this month is computed to be 515 tons of copper ore.

MID-DEVON COPPER.—J. Neill, March 15: A Shaft: Influx of water increased in early part of week to such a volume from excessive rainfall that machinery at full speed has only drained it from 1 ft. to 2 ft. in 24 hours. This morning another surface-rod broke at a weld, and the water rose to the back of the 80 during the eight hours' stoppage to replace rod. The wheel will be kept at maximum speed to reduce water as quickly as possible.—O Shaft: The A shaftmen have been working—nine men driving the 50 east, and three removing attle, &c., and occasionally stoping. The 50 east has been extended towards the slide 10½ ft. by rock-drill. Strata decidedly easier for progress, and from general appearances expect to find it around the slide productive of copper ore. The stope in back of cross-cut, north from the 50 east, worked by four men and four boys, with occasional assistance from three men from A shaft, is not so good, having fallen off to 1¼ ton per cubic fathom. The strata in east and west ends of stope is promising, having a large quantity of chlorite intermixed with friable garnet coated with ore.

NEW CARADON.—N. Richards, March 19: We have now drained and cleared Dawes' shaft 6 fms. 5 ft. below the 20, and hope to reach the 30 in three or four days from date. We are also clearing and drawing away the stuff from the 20, which is being done as fast as convenient or without hindering the shaftmen, and hope soon to be able to examine and report on the same.

NEW WEST CARADON.—N. Richards, March 19: We have suspended the driving west on the No. 6 lode, and placed the same pare of men to drive east on this lode which has much improved in appearance within the last few days, and is now producing saving work, and looks as if it would further improve. The branch we are driving on east at this level is producing some rich copper ore. There is no change in No. 5 lode at this level.

NINNIS DOWNS.—Capt. Oliver, March 10: Since Feb. 19 we have driven 12 ft. on the lode in the 12. The lode has opened from 6 to 12 ft. in width, and is producing good stones of tin. There is still a good stream of water coming out of it. Other than its size the appearance of the lode has not changed. We have recommenced to sink a shaft to the 12 for ventilation, &c.; the shaft was sunk on the lode in our former workings to the depth of 7 fms. Our men are all working full time.

NORTH GREEN HURTH.—Jas. Polglase, March 13: The deep cross-cut is without change. The vein in south end from deep level continues about the same. No particular change in the new property.

NORTH TRESKERBY.—Pryor and Son, March 13: The deep county adit cross-cut is letting out more water, and is nearing No. 5 lode, and the ground is strongly mineralised. This important point will be pushed on with greater speed as soon as the communication is effected to Jabez's shaft. No. 2 lode in this level driving west of cross-cut is a little disordered, having met with another branch of the cross-course, but this we only consider to be temporary. This end is being pushed to reach Jabez's shaft a distance of about 11 fms. No. 1 lode in this level, east of cross-cut, continues to be worth 16*l.* per fathom. The sinking of Jabez's shaft is now completed to the deep county adit, and the shaftmen are now engaged in putting in ladder road from the shallow adit to the bottom of the shaft, which will be finished by the end of this week, when the shaftmen will commence to drive east from the bottom of the shaft to effect the communication to the cross-cut, which we fully believe will be effected in the time we have before named, giving us good ventilation to enable us to drive east and west of the cross-cut on Nos. 3 and 4 lodes, which are rich for tin, and all in virgin ground for the length of the property. The 80-in. pumping-engine is now put in thorough good condition, and the engineer will commence to fix the steam capstan and winding gear by the latter part of next week, against which we hope the boiler-builders will finish the required repairs of the two boilers attached to the 80-in. engine, which with the repairs the engine has undergone will lead to a great saving in coals, and enable us to drain the copper lode with much greater speed, and at a considerable less cost. All other surface work is being carried on as fast as the weather will permit.

— Pryor and Son, March 20: The respective tutwork bargains throughout the mine continue much the same as for some time past, and Jabez's shaftmen will communicate to the deep adit level on No. 2 lode in the time we have before mentioned. These two points are being pushed with all possible speed, the communication being of the greatest importance. All the surface work is being carried out as fast as possible, and the boiler-builders will finish the required repairs of the two boilers attached to the 80-inch pumping-engine on Monday next. Saturday, March 23, being our pay and setting a full report shall be sent.

OKEL TOR.—H. Bulford, J. Rodda, March 20: We have set the new eastern shaft to sink below the 90 at 16*l.* per fathom. The 90 to drive east at 5*l.* per fathom, and the 90 cross-cut south at 4*l.* per fathom. No. 1 winze in bottom of the 80 is down to the 90, where we are cross-cutting north to cut the north part of the lode at 7*l.* per fathom.

OLD GUNNISLAKE.—Wm. Skewis, R. C. Seccombe, March 19: Bonny Lode: In the last 6 ft. driving of the western end the lode has varied from 12 to 20 in. wide, producing rich quality yellow copper ore.—Caunter Lode: In the eastern end the lode is producing good saving work for copper ore, and is of such size and quality as to justify the expectation of its soon becoming profitable for working.—Main Lode: In the rise in back of the adit, east of great cross-course, the lode is fully 2 ft. wide, composed of gossan, quartz, carbonates, and grey and yellow copper ore of rich quality. Altogether a very promising looking lode.

OLD SHEPHERDS.—R. Nancarrow, J. Nancarrow, March 19: We hope this week to send down the small lift, and soon reach the bottom of Harvey's engine-shaft, where we expect good results. At the 102 fm. level both east and west we have let down large quantities of water in clearing, and have also broken some splendid stones of lead; but we shall not be in a position to work on this lead for another fortnight, as there is a good deal of work yet to do to make the levels secure to the lead grounds. We shall, as soon as possible, clear the 102 east, with a view to communicate with Teague's and old sump shafts, and no doubt open up good ore ground. We have effected a communication between Teague's and Harvey's shafts at the 92, which has ventilated the mine to this depth and also opened up a travelling road. The tribute pitches throughout continue to produce good lead, and on Friday next we purpose sampling two more parcels. All our machinery is working in a satisfactory manner, and our surface operations proceeding without interruption.

PATTERSYKE AND CLARGILL HEAD.—J. Peart, March 14: Top Level: The drift in this level going south is not looking quite so well, the vein is split up into two or three parts, and that no doubt is the cause of it being a little poorer.—Low Level: The drift from the foremost rise is very much softer, being on the east side of Sir John's vein, and having the Clargill Head vein a little to the east; the drift being between the two veins the influence from them is making it easier to work. The last two weeks our six men have driven the drift 8 fathoms. We are not testing the veins at present, but will explore them after we get to the intersection.

PLUSHEY.—T. Trelease, March 20: On my last report I spoke of our intention of adopting a new principle in sinking our shaft for the purpose of accelerating speed, &c. Since that time we have converted our shaft from an oblong to a circular shape, and made the necessary alterations for drawing with horse instead of manual labour, and we have now had a full week on the new principle, with horse-power for drawing, and 20 men instead of nine, as before, and the result of the week's sinking is 2¼ fms., which is very satisfactory in every respect, and according to this rate of sinking we shall accomplish in three months fully as much as we should have done in nine months under the old system. This work is accomplished by the men working six hours shift from Monday morning at 1 A.M. until Saturday night at 11 P.M. The carpenters have finished their contract of erecting the wheel. The water was turned on it on Wednesday evening, and it appears to work very satisfactorily. We expect new winding-gear from Newcastle next week, which we shall at once fix to the wheel. This will save the cost of horse-labour, and be more powerful and effective. Our contractor expects to make still better progress in sinking when it is at work. We shall also fix pitwork for pumping the water as soon as possible to the same wheel, which we anticipate will be sufficiently powerful to meet all our requirements for a considerable depth. Our shaft is now down about 13 fms., and at the present rate of sinking we shall reach the 40 in about three months, where, from the underlie of the lode as seen at surface, we expect to meet with the lode. We then purpose driving on its course north and south, and from its appearance, character, and composition at surface, we may reasonably expect to open up a productive and profitable mine at this depth.

POLBERRO.—Wm. Vivian, March 20: We are pushing on the clearing of the adit level and engine-shaft with all practicable speed. Our tribute ground is producing from 1 to 2 tons of black tin per month. As we continue to open up the mine our returns of tin will increase.

POLCREBO.—W. H. Martin, March 17: Highburrow Shaft: The 40 east end is driven from the shaft 10 fms. in this drivage: the lode is strong, and of a very promising appearance, and producing good stones of tin. This end has been pushed on without any hinderance to reach the junction of the north lode; driving by six men, at 3*l.* per fathom. The 40 west is driven 5 fms.; driving by four men, at 3*l.* per fathom. The lode is producing saving work for the stamps. The 30 east is extended from the shaft about 32 fms.; in the last 6 ft. we intersected a cross-branch, which has unsettled the lode, but in my opinion it will only be for a short distance; driving by six men, at 3*l.* 10s. per

fathom. In the 30 north-west, for the short distance opened, the lode is 2½ ft. wide, good work for tin, and it has every appearance of continuing, and by opening on this lode it will be a guide to the operations in the 40 east. The winze sinking in the bottom of the 30 west in the north cross-cut is down 10 ft.; sinking by four men, at 6*l*. 10s. per fathom. The lode is opening wider, and equal in value to my former reports. The driving of the 40 west towards and under this winze will open up a good section of ore ground. The tribute pitch in the back of the 17 north level by two men, at 13s. 4d. in 1*l*. A pitch in the back west by four men, at 12s. in 1*l*. A pitch in the bottom by two men, at 13s. 4d. in 1*l*. In conclusion, I beg to remark the driving of the 40 east is a very important piece of work, being 10 fms. deeper than Harvey's shaft, having the prospects before the end to intersect the junction of the north lode, and also the south lode, and the dip of the slide from Harvey's shaft, each intersection of which is likely to increase the production of tin. On Thursday last we sold a parcel of tinstuff for 34*l*. 13s.

— W. H. Martin, March 20: The new lode at the 30 north-west, judging from present appearances, is the main tin-producing; lode maintains its full size, and without any doubt we shall have the same continuation at the 40 east, which level is pushed forward to the junction with all energy, and good progress is made.

POLROSE.—W. Bennetts, March 19: I am pleased to say we are now in regular course of forking below the 112. The men are now driving the 112 east where the lode is 2½ ft. wide, composed chiefly of mundic and peach, with a little tin. As soon as the water is out we shall resume the driving of the 122 cross-cut south, and also the 122 east on the lode.

PRINCE OF WALES.—S. Roberts, March 19: Setting Report: The 102 east is set to six men, at 8*l*. per fathom; the men are driving by the side of the lode, which when last taken down was 3½ ft. wide, worth 4*l*. per fathom for tin, with every indication of an early improvement. The 102 west to six men, at 11*l*. per fathom; lode 4½ ft. wide, worth 3 tons of copper ore and 4*l*. for tin per fathom. The stope in back of this level, east of rise, to six men, at 4*l*.; lode 6 ft. wide, value same as last week—8*l*. per fathom for tin. No. 1 stope west of rise to six men, at 3*l*. 10s. per fathom; lode 4 ft. wide, worth 2 tons of copper ore and 5*l*. for tin. No. 2 stope west of rise to four men, at 2*l*. 15s.; lode 3½ ft. wide, worth 2¼ tons of copper ore and 4*l*. for tin. The 90 west to four men, at 6*l*. per fathom. During the last fortnight we have been driving in the new Silver lode carrying the level 4 ft. wide, with no north wall, leaving the Prince of Wales lode on the south, which the men are now blasting down, and find it 3 ft. wide, worth 1½ ton of copper ore and fair quality tinstuff. In the winze in the bottom of this level the water being rather quick we set it to four men and two boys, at 8*l*. 10s. per fathom; sinking by the side of the lode. The 90 east is not yet set; the men are clearing the attle in order to blast down the lode, which looks well as far as seen. The stope in back of this level, west of No. 1 rise, to two men, at 6s. per ton; lode 4 ft. wide, worth 6*l*. per fathom for tin. The stope west of No. 2 rise to two men, at 7s. per ton; lode 2½ ft. wide, worth 5*l*. per fathom for tin. The stope east of No. 2 rise to four men, at 6*l*. per fathom; lode 4 ft. wide, worth 7*l*. for tin. The 55 west to two men, at 8*l*. per fathom; lode 3 ft. wide, producing tin, but at present somewhat disordered. Tribute pitches are reset at from 10s. to 13s. 4d. in 1*l*.

ROMAN GRAVELS.—Arthur Waters and Son, March 20: There is no change to notice since our report of last week. We have to-day sold 250 tons lead ore for 1718*l*. 15s.

RUSSELL UNITED.—John Bray, March 20: The lode in Matthews' shaft, sinking below the 97, is from 3 to 4 ft. wide, still producing stones of copper ore, but does not improve sufficient to value.—Stephen's Engine-Shaft: We are pushing on the cross cut south towards the lode at the 45 with all possible speed. The ground in the cross-cut is spotted throughout with copper ore.

SINCLAIR LEAD AND BLENDE.—W. T. Harris, March 20: Wacco Shaft: In the 60 south the lode is 1 ft. wide, yielding stones of lead; indications most encouraging, and the intersection of Balen Gwyn lode must soon be a reality; ground favourable for progress.

SOUTH CONDURROW.—W. Rich, W. Williams, H. King, March 19: The 20 end east of the engine-shaft is worth 7*l*. per fathom. Two stopes in the back of this level are worth 10*l*. and 12*l*. per fathom respectively. The 30 end west is without alteration to notice. The 40 end east is worth 10*l*. per fathom. The 50 east of King's is worth 12*l*. per fathom; the stope in the back is also worth 12*l*. per fathom. The 60 end east is worth 8*l*. per fathom; the stope in the back is worth 15*l*. per fathom. The 70 end east is worth 7*l*. per fathom; the stope behind the end is worth 10*l*. per fathom. The 80 end east carries low quality tinstone; the stope in the back of this level is worth 10*l*. per fathom. The ground is favourable for driving in the 80 cross-cut north towards the copper lode. The 80 west of Plantation shaft is being driven by the side of the lode; we are anxious to reach the winze ahead of this end as quickly as possible. The lode in the back of the 93 east and west of the winze is worth 15*l*. per fathom. The lode in the 93 end, west of Marshall's shaft, is opening out wider, and yields saving work for tin; the rise in the back of this level is worth 6*l*. per fathom. The winze below the 78 is unproductive; the lode in the 78 end west has a promising appearance. The stope in the back of the 78 east is worth 12*l*. per fathom. The 68 end west is letting out water freely, and is worth 7*l*. per fathom for tin. In the 54 west we are cross-cutting south to intersect the south part of the lode.

SOUTH DARREN.—J. Mitchell, March 20: The following bargains were set on Monday last for one month:—To drive the 130 east, by four men, at 9*l*. per fathom; the end is worth 15 cwts. silver-lead ore per fathom. This end we expect will soon improve, as we are nearly under a good shoot of ore gone down from the 120. To drive the 130 west, by four men, at 9*l*. per fathom; the lode is strong, and worth 1½ ton silver-lead ore per fathom. To stope east of winze in the 130 west, by four men, at 3*l*. 12s. 6d. per fathom, worth 2 tons silver-lead ore per fathom. No. 3 stope in the 120 east, by four men, at 3*l*. 7s. 6d. per fathom; worth 1¾ ton of silver-lead ore per fathom. Two men are engaged picking stulls in the 120 west. The filling of the skip at 7s. 9d. per 100. The landing of the skips at 5s. 8d. per 100. Drawing and dressing going on regularly.

SOUTH DEVON UNITED.—Wm. Hooper, March 20: The lode in the western end at 120, at Martin's shaft, still continues its size—from 5 to 6 ft. wide, and worth 12*l*. per fathom. The lode in the eastern end at the 120, at Martin's shaft, is fully 5 ft. wide; at present not looking quite so well, being mixed with spar and patches of killas, now worth 5*l*. per fathom. Having sunk a winze between 2 and 3 fms. in the bottom of the 110, and 8 fms. east of the above shaft, where the lode is 4 to 5 ft. wide, and worth 10*l*. per fathom. Therefore, we have every reason of again believing the above will improve as it is extended east. There is no particular change in the appearance of the lode at the adit level, west of old sump shaft, since last reported on.

SOUTH TOLCARNE.—T. Angove, S. Arthur, March 19: Fraser's Lode: The 80, west of engine-shaft, continues to be worth 6*l*. per fathom for tin. The lode in the rise in back of the 80 west is very promising, being 5 ft. in width, and worth for tin fully 7*l*. per fathom. This rise will be communicated to the 70 within the next four weeks, which will open up a profitable piece of ground for stoping. No particular change in the stopes in back of 70, 60, and 50 fm. levels east and west of shaft, the average value 5*l*. per fathom.—Taylor's Lode: The lode in winze under the 12 is still looking very well, worth fully 30*l*. per fm. In continuing the 24 cross-cut south we have intersected another part of the lode containing rich deposits of tin. We purpose now to drive west to get under the winze below the 12, where we expect to find the lode similar in value to the winze above. The Gossan lode in the 24 5 fms. west of winze is worth for tin and copper 4*l*. per fathom. The lode in the 24, east of winze, is worth for tin and copper 5*l*. per fm.; this lode both east and west of winze is opening out good ground for stoping.

TAMAR SILVER LEAD AND FLUORSPAR.—R. Goldsworthy, March 20: There is no alteration in the appearance of the lode in the 37 south since last report, still 4 ft. wide, producing saving work for silver-lead and 4 tons of fluor-spar per fathom, and promising for an early improvement. The lode in the winze sinking in the 27, north of new shaft, is disordered by a floor of capel, but this we hope is only temporary. The stopes are producing their usual quantities of silver-lead and fluor-spar.

TANKERVILLE GREAT CONSOLS.—Arthur Waters and Son, March 20: No change of note having taken place since the date of our full report last week, we have nothing further to add to-day. We have to-day sold from the Bog Mine 30 tons of lead ore, for 196*l*. 10s., and by this post sent out some samples of 25 tons of No. 1 blende and 20 tons of No. 2 ditto, for sale on Thursday next.

TREBARTHA LEMARNE.—Wm. Skewis, March 19: The Gulley lode continues to yield its usual quantity of tin. The tramroad for conveying the stuff to the stamps will be finished this week; this being done, the erection of another 12 heads of stamps will be commenced forthwith. The quantity of tin cleaned last week was rather greater than in any one week previously.

WEST BASSET.—J. Nicholas, F. Hodge, March 15: Since our last report four weeks ago we have risen 10 fms. by boring machine in the rise in back of the 124, west of Grenville's, which has not only laid open a profitable section of tin ground for stoping, but has intersected a lode with a leader 2 ft. wide that will yield 56 lbs. tin to the ton of stuff. This is a new feature in the mine, and from present appearances adds much to the value of the western portion of the sett. In the 180, east of Percy's, we have laid open a profitable piece of tin ground for stoping. We have commenced to rise by boring machine in back of 65, east of North Frances shaft, where the lode is 10 ft. wide, and will yield ½ cwt. tin to the ton of stuff. By reason of the improvements in the lode at the above-named points, our future prospects are much improved. Other places much the same.

WEST CARADON.—N. Richards, March 19: The rise we are putting up on the south part of Jope's lode in the back of the 38 is looking very well, and producing some good copper ore. Nothing whatever has been done on this part of lode west, and doubtless it will be intersected in Hallett's cross-course. The rise and stopes in the back of the adit level on Gilpin's lode are producing together about the same quantity of copper ore—3½ tons per fathom. A stope in the bottom of this level will yield fully 1 ton of ore per fathom.

WEST CREBOR.—J. Andrews, March 19: The lode in the engine-shaft, sinking below the 80, is still 4 ft. wide, and yields a little ore and mundic, but not to value. The lode in the 80 west is 6 ft. wide, composed principally of quartz, capel, and mundic, with good quality copper ore throughout the whole width of the lode, but as yet not in sufficient quantity to value.

WEST GONAMENA.—N. Richards, March 19: The underlie of Gilpin's lode in the back of the midway level, has taken a part of the rise and stopes into West Caradon sett. We are now driving east on this lode, which is producing saving work for copper, with every appearance of an early improvement. I again repeat that I do not think there are more promising lodes in this or any other district, or a piece of ground deserving of a more spirited trial.

WEST HOLWAY.—March 20: In the 80 level east the cross-cut north has reached the hanging side of the lode, and a nice mixture of lead and blende discovered; have commenced driving east upon its course, and prospects are very encouraging. The cross-cut south ground indicates a near approach to the lode, and favourable for progress.

WEST POLBREEN.—Wm. Vivian, March 20: In the 40 driving west there is no change to notice since last report. I find the water is going back in the engine-shaft. I hope to resume the sinking again shortly.

WEST PHŒNIX.—W. Rich, R. Gluyas, March 15: During the past month we have been busily engaged in making a communication on the line of the lode from the 40 to the end of the north cross-cut at the 60. This has been effected, and the pumps removed from the old shaft to the new; the sinking will now be carried down on the south wall of the lode instead of in the hard country rock as heretofore. If the ground continues favourable as at present we hope to sink much more rapidly than before the course of the shaft was altered; the present price for sinking is 14*l*. per fathom. We have cut through the cross-course in the 55 east, and the lode looks more promising as we extend away from its influence. In the 55 west the part of the lode carried is about 5 ft. wide, of a very kindly appearance, and carries a little tin, but not enough to pay for working; there is a very great extent of unexplored ground on the course of the lode in a westerly direction, and we are urging on the level by six men as rapidly as possible.

WEST WHEAL PEEVOR.—W. T. White, March 19: The points we now have in operation are being pushed on as vigorously as possible, and we sincerely believe that from these something good will be opened up. The cross-cuts we have driving are for cutting known and productive lodes, and, although we may not come out exactly on the richest part of the lode, yet, by its development, good results may follow. We think we have to-day met with one of Wheal Diamond lodes in the 36 cross-cut south, but shall be able to speak more definitely respecting it in a day or tw , when we open on it. We have no other change to remark.

WHEAL CASTLE.—J. Boyns, March 15: We have cleared up the shaft and forked the water out of the 80, and find it driven 17 fms. west and 18 fms. east of shaft; very little of the lode has been seen, it is now standing in the side of the level, except in the shaft plat, where there is a new lode come in from the north side that had not been seen before. The former miners commenced to cut into the lode in the east end and cut water that drowned the mine; the water is still coming. We are clearing the level, and shall then put men to prove the lode at once. In the cross-cut south, towards Forman's lode, in the 25, we have veins of quartz mixed with mundic and a little copper, which are likely to be branches from the lode.

WHEAL CREBOR.—H. Phillips, P. D. Holman, March 18: Setting Report: To sink the new shaft, by six men, at 19*l*. per fathom; the lode is large containing a little mundic spotted with copper ore. To drive the 144, east of new shaft, by six men, stent the month at 5*l*. per fathom; the lode is over 3 ft. wide, composed of capel, arsenical mundic, intermixed with copper ore. To drive the 144, west of new shaft, by four men, stent the month, at 5*l*. per fathom; more mundic and spar making in the lode. Similar changes have occurred in the drivage west of shaft; the lode will yield 13 tons of ore and 3 tons of mundic per fathom. To stope the back of this level, by six men, stent the month, at 2*l*. 15s. per fathom; the lode will yield 8 tons of ore and 4 tons of mundic per fathom. To sink the winze in the bottom of the 132, east of new shaft, by six men, stent the month, at 11*l*. per fathom, on the south part; the lode standing will yield 8 tons of good ore per fathom. To drive the 132, east of new shaft, by four men, stent the month, at 6*l*. per fathom; the lode will yield 1 ton of copper ore and 1 ton of mundic per fm. To stope the back of the 132, by four men, stent the month, at 3*l*. per fathom; the lode will yield 4 tons of ore and 2 tons of mundic per fathom. To stope the bottom of the 120, east of No. 2 winze, by six men, stent the month, at 5*l*. per fm.; the lode will yield 10 tons of ore and 2 tons of mundic per fathom. At the 108, east of new shaft, we have thought it advisable to put out a cross-cut in quest of lode, if any, standing in the north, by two men, stent the month, at 8*l*. per fathom. To drive the 72, east of new shaft, by four men, stent the month, at 5*l*. 10s; the part of the lode carried being capel and arsenical mundic. To drive the 43, east of new shaft, by two men, stent the month, at 6*l*. per fathom; the part of the lode carried contains capel and mundic, intermixed with copper ore. To stope the back of the 43, east of new shaft, by two men, stent the month, at 3*l*. 10s. per fathom; the lode will yield 4 tons of copper ore and 4 tons of mundic per fathom. Our sampling will be on the 27th inst., when we expect to sample 500 tons of copper ore.

WHEAL COATES.—W. Vivian, March 20: We sampled 63 tons of copper ore on Tuesday last. This will be sold on April 3. We have doubled our returns of copper in the last two months. I hope to continue to increase our returns of copper, as the mine continues to improve as we open up at the different points of operations.

WHEAL UNY.—W. Hambly, March 20: Setting Report: Hind's engine-shaft is now driven to the 203, and a contract is set to the 12 shaftmen to put a solar in the bottom of the shaft, take out the pent-house, case and divide the shaft from the 193 to the 203, put in skip-road, and fix footway for 12*l*. When this is completed the lode in the bottom of the shaft which is standing to the north will be cut through for the purpose of ascertaining its character and yield. Great importance is being attached to this, and justly so, since the produce and make of the lode in the granite is of an improved character to that seen in the killas, therefore, no time will be lost in accomplishing this work. The 193 to drive west of shaft at 4*l*. 10s. per fathom, and worth 6*l*. per fathom for tin. The 193 is extended east of shaft about 24 fms.; the lode for most of this drivage has been uniform in size, and worth from 6*l*. to 8*l*. per fathom. We have commenced a rise in the present end, and set the same to six men as a contract to put the rise through and communicate with the level above for 35*l*., when done it will give good ventilation and open up a section of ground for stoping. The 182 to drive west of shaft, by 6 men at 7*l*. per fathom; the part of the lode carried for the width of end is worth 12*l*. per fm. The north or remaining portion will be taken away by stoping. Two stopes working in the back of this level by 12 men. No. 1 is set at 3s. 9d. per ton of stuff, and worth 13*l*. per fm. for tin. No. 2 is set at 3s. 6d. per ton of stuff, and worth 15*l*. per fm. We have 50 men working a tribute at various points in the mine from 2s. to 13s. 4d. in 1*l*. The usual quantity of stuff has been stamped in the past month, and 20 tons of black tin has been sold at 46*l*. per ton.

WYE.—J. Kitto and Son, March 15: In accordance with our last report since that date we have been engaged in driving the 70 cross-cut on the lode, our principal object being to reach the south side, where we expect to find a course of profitable ore ground corresponding to, and under that seen at the 58. This cross-cut has now been driven about 4½ fms., and in this distance it is very encouraging to observe the marked improvement which has taken place in the general character of the lode when compared with its appearance in the level above, it being at the 70 much harder, better defined, and yielding good stones of lead ore, consequently we are led to believe we shall not be disappointed on reaching the usually productive part of the lode, which is probably from 3 fms. to 4 fms. before us, and as the rock is harder than we anticipated, we expect it will take us another month or perhaps a little longer to reach it. No time, however, will be lost, nor effort spared to get at it soon as possible.

YSTWITH.—J. Kitto and Son, March 15: Our progress in driving the adit cross-cut south has been somewhat retarded during the past month, in consequence of the air-compressing machinery having been undergoing some necessary repairs for about a week. We are glad, however, to state that it has been put into a most efficient state, and with the rock-drills is now working satisfactorily and doing good duty. The rock in the forebreast of the cross-cut is still letting out large streams of water, which are draining the ground as it is being driven through, and plainly shows that there is something before us from which the water continues to flow; what that is it remains to be proved, but in all probability it is one of the lodes that we are driving to prove. We have, therefore, reason to expect an early discovery at this point.

IMPROVED CUPOLA—THE RAPID.

That the efficient action of the cupola has much to do with the economy of carrying on a foundry is well known, yet the old form has been generally retained with great tenacity, even after it has been demonstrated that the consumption of fuel in running down a given quantity of metal is considerably greater than theoretical calculation prove to be necessary. As a remedy for this Messrs. THWAITES BROTHERS, of Bradford, have been very extensively introducing an improved cupola—Stewart's Rapid—which appears in all cases to have given great satisfaction. The main feature is that at the melting part the internal diameter is reduced. There are several tuyeres arranged in zones, and the collecting space for melted metal is provided for in three ways—by an enlargement of the base inside under the melting part; by a fixed receiver outside lined with fire-brick and in communication with the melting part, or by a portable receiver. In a furnace of the second kind recently erected the diameter at the tuyeres was only 22 in. This part concentrates the fire in a small compass, and the metal in fusion has less space to traverse while exposed to the oxidising influence of the blast, insuring tougher castings and less waste by the oxidation of iron in the furnace and loss in the slag. The three zones of fusion and three rows of tuyeres may be thus described. In the top row each tuyere is provided with a shut-off valve, there being thus three valves which have their plugs connected together with malleable iron pitch chain, and are opened or shut simultaneously, each to an equal extent, with one handle. The three rows of tuyeres are all in communication by an annular casing, to which the stand pipes for the blast are connected, and opposite each tuyere is provided a circular cover that moves off, and when down is perfectly air-tight. These circular covers are provided with mica discs. The respective areas of the three rows of tuyeres have been proportioned by experiment to give the most effective distribution of blast and economical results. The cupola, it will be noticed, is arched over at the top, and has an opening fitted with flap door for the escape of the gases evolved from the consumption of the coke, which entirely obviates the nuisance and danger of sparks and cinders blowing out upon the neighbouring property. The flap door can be set at any angle, and consequently the sparks, &c., which are ejected in great quantity when blowing off are deflected on to the ground at the base of the cupola.

The cupola stands upon a cast-iron plate on four pillars, and is provided with a drop bottom. In front of the cupola is fixed the receiver constructed with spout, and proportioned large enough to hold the maximum quantity of melted iron that may be required. The receiver is connected by a pipe and ejector valves. The metal in receiver is kept hot and in agitation by some of the blast which escapes into it, the heat in which is transferred to the cold incoming blast by the injector. The results obtained were considered by practical men to be excellent, and particularly so with regard to the rapidity with which the metal was run down. The coke consumption also—1 cwt. of coke to 14 cwts. of iron—is much lower than required for the common form of cupola, the general rule for which is —coke required equals one-seventh the weight of iron, and with which 2 cwts. to 2½ cwts. of coke per ton of iron is very good practice. Mr. Stewart expects, however, to greatly improve upon the coke consumption, and the opinion was expressed at the trial that less coke—a proportion of 1 cwt. to 17 cwts. of iron—would have sufficed. Among the advantages claimed for the cupola are that it melts rapidly, with great uniformity, with much less than the usual quantity of fuel, and is not more expensive than the ordinary cupola; absence of flame at the top of cupola, and no throwing off of combustible gases, with the consequent waste of fuel. Carbonic acid gas alone escapes, and the top of the cupola is also kept very cool. These cupolas are made of melting capacities from 1 ton to 20 tons per hour; one of about 4 tons melting capacity per hour takes a bed of coke of about 4 cwts., whereas in ordinary furnaces about 13 cwts. is the usual bed charge, thus showing an advantage of about 9 cwts. of bed coke. The approximate dimensions are—External diameter of shell, 4 ft.; total height from ground line, 24 ft.; height from ground line to underside of air belt, 5 ft.; depth of air belt, 2 ft. 6 in.; diameter of air belt, 5 ft. 6 in.; melting part of cupola, 3 ft. 6 in. deep by 1 ft. 10 in. diameter, widening out to an internal diameter of 3 ft. in upper portion of cupola. Thickness of lining at melting part, 1 ft. 1 in.; upper portion, 4½ in.; internal diameter of receiver, 3 ft. by 3 ft. deep; height of tapping hole from ground line, 2 ft. 3 in. Mr. Stewart's arrangement has the advantage that it is well adapted for heavy and light work, and that the apparatus is cheap, durable, and efficient.

THE BREADALBANE MINES.

An interesting paper on the Breadalbane Mines was read by Messr J. S. GRANT WILSON and H. M. CADELL, B.Sc., of the Geological Survey of Scotland (with permission of the Director General), at a recent meeting of the Royal Physical Society of Edinburgh. The mines and ore deposits of the district had, it was remarked, been previously described by Thost and Odernheimer, but these writers had overlooked some important geological considerations, and the present communication dwelt more particularly on the geological structure of the region, which the authors had worked out in some detail. The mines were situated in the basin of the Tay, and the highest—those of Tyndrum—were first noticed. The rocks of the Tyndrum area were metamorphic like those at other parts of the Breadalbane Highlands. A large fault with an E.N.E. and W.S.W. strike crossed the country a short distance west of the village, and on the eastern or downthrow side mica schist was the prevailing rock, while the more hilly district on the west side was composed of quartzites, with occasional beds of schist. The vein of galena in which most of the workings had been made was in the quartzite alongside of the line of fault. There was a poorer vein in the fault fissure itself, but it had never been extensively mined. Both veins had an easterly hade, but the inclination of the "hard vein" in the quartzites was greater than that of the "soft vein" in the fault fissure, so that both converged towards a line at a certain depth below the surface. Contrary to usual experience, the conjoint vein was found to be much poorer than the individuals composing it, and mining operations ceased to pay when it was reached. The ore was distributed in broad diagonal bands, running rudely parallel to one another. The veins resemble in this, as in other essential features—size always being excepted—the celebrated veins of Clausthal on the Upper Hartz. Galena was discovered here in 1741, and was mined with varying activity by different companies, including the Mine Adventurers of England and the Scots Mining Company.

The mines were carried on by the late Marquis of Breadalbane from 1858 till his death in 1862, when they were abandoned, having ceased to pay expenses. The chrome iron deposit of Corriecharnaig, in Glen Lochay, was next noticed. The ore occurred in a large mass of serpentine, and appears to be tolerably abundant, but it had never been proved to any great extent, as only about 60 tons had been raised and sold in 1855-6. The ore contained about 37 per cent. of sesquioxide of chromium, 100 lbs. being able to furnish 70 lbs. of bichromate of potash. Grey and yellow copper ore had been worked at Tomnadashan, on Loch Tay, where it was found disseminated through a mass of diorite, which had been intruded into the schists. The diorite had in turn been invaded by a granitic rock, with abundance of pink orthoclase felspar, and it was interesting to note that the ore seemed most abundant at places where the acid rock was in contact with the basic diorite. Molybden glance occurred in the granitic rock, but no traces of galena or blende were to be found in the vicinity. Argentiferous galena veins existed at Corrai Bui, on the top of a hill, named Meall na Creig, about two miles south from Loch Tay. The summit was capped by calcareous schists, through which the veins ran. They were thin, but the galena was very rich, containing from 85 to 600 ozs. silver per ton of ore. On passing downwards into the ordinary non calcareous schists the ore disappeared, and at a depth of 100 ft. below the surface nothing was found but barren quartz. Two small pieces of native gold had been found in the veins. Many other small veins of copper and lead ore were known to occur in the Breadalbane district, but they were unfortunately all far too thin to be workable.

WATSON BROTHERS MINING CIRCULAR.

WATSON BROTHERS,
MINEOWNERS, STOCK AND SHARE DEALERS, &c
1, ST MICHAEL'S ALLEY CORNHILL, LONDON

We brought out Herodsfoot Mine in the year 1843—it was introduced by us in 256 shares only of 5*l*. each; the shares were afterwards multiplied, and the mine paid good and continuous dividends for some years. Then it fell off, and owing to deaths was sold to another company, in which we also took a large interest, and should have continued to hold it, but at a meeting in London a few years ago, at which we were not present, two resolutions were passed that we greatly objected to, and we got out of the mine. The first was the *removal* of the office from *London* to Cornwall, and the second authorising the borrowing money of the bankers to carry on the mine, instead of making calls for the purpose, and so keeping the mine as far as possible out of debt. The final collapse of the concern was owing to the defalcations of an official who suddenly left the country; but its difficulties began when the resolution to borrow money was passed. The paragraph, therefore, to which our correspondent calls attention is not strictly correct in putting the blame on London mismanagement.

We stated some weeks ago that D'Eresby Mountain had sold 500 to 600 tons of lead ore; that the ore ground was fast dipping south into the hill, and that to work it advantageously it had become necessary to sink a new shaft from surface into the heart of the ore ground; this was commenced last October, and will be completed in about two months, when, if what the agents say is correct, they will begin by returning 20 to 30 tons, and get up to 50 tons of lead a month, and as 25 tons a month would meet the costs, good profits might be made. But since this shaft was begun five months ago no returns have been made, and we have been called upon, as largest shareholders in the mine, to make advances to meet monthly costs. The company have unissued shares, but these cannot be issued under 1*l*. each, and the directors, acting under a suggestion from us, have agreed to issue 1000*l*. debenture bonds, bearing 10 per cent. interest. These will be—that is, both principal and interest—a first charge on the property, which has cost 30,000*l*. to 40,000*l*. The debentures will be issued in sums of 5*l*., 10*l*., and 20*l*. each, and in the first instance will be offered to present shareholders only. Those not taken up by them may be taken by us, and a part distributed to any of our correspondents who may apply for them early and state the amount they would wish to subscribe.

The discount allowed on payment of calls is to encourage early payments. No one has any right to the discount, nor can any secretary allow it, properly speaking, even two days after the date fixed for it. Manifestly it would be unjust to A, who pays his calls on a certain day in order to get the discount, to allow the same discount to B, who might pay a week or more afterwards.

There are 169 shareholders in East Blue Hills, so that shares are well held; and as the purser said at the meeting in ordinary times the shares would have been at 1*l*. each, but in these times nothing seems to move except downwards.

The Mining Market: Prices of Metals, Ores, &c.

METAL MARKET—LONDON, MARCH 21, 1884.

IRON.	£ s. d.	£ s. d.
Pig, GMB, f.o.b., Clyde	2 2 6-	—
,, Scotch, all No. 1	2 3 3-	—
Bars Welsh, f.o.b. Wales	5 2 6-	—
,, ,, in London	5 12 6-	—
,, Stafford., ,,	6 15 0- 7 0 0	
,, in Tyne or Tees	5 2 6-	—
,, Swedish, London	9 0 0- 9 10 0	
Rails, Welsh, at works	5 2 6-	—
Sheets, Staff., in London	7 15 0- 8 0 0	
Plates, ship, in London	8 5 0- 8 10 0	
Hoops, Staff.,	6 15 0- 7 5 0	
Nail rods, Staff., in Lon.	6 15 0- 7 0 0	
STEEL.		
English spring	12 0 0-18 0 0	
,, cast	30 0 0-45 0 0	
Swedish, keg	13 0 0-14 0 0	
,, fag. ham.	13 10 0-14 10 0	
Rails at works	5 0 0-	—
,, Light, at works	6 0 0-7 0 0	
LEAD.		
English pig, common	11 7 6-11 12 6	
,, ,, L.H.	11 12 6-11 17 6	
,, ,, W.B.	11 17 6-12 2 6	
,, sheet and bar	12 10 0-	—
,, pipe	12 17 6-	—
,, red	15 10 0-	—
,, white	16 10 0-19 0 0	
,, patent shot	14 15 0-	—
Spanish	11 0 0-	—
NICKEL.		
Mets per cwt.	— —	—
Ore 10 per cent. per ton.	— —	—
SPELTER.		
Silesian, ordinary brands	14 10 0-	—
,, special brands.	14 15 0-	—
English Swansea	15 2 6-	—
Sheet zinc	18 0 0-	—

TIN.	£ s. d.	£ s. d.
English, ingot, f.o.b.	88 0 0-	—
,, bars ,,	89 0 0-	—
,, refined	90 0 0-	—
Australian	83 15 0-	—
Banca	nom. -	—
Straits	83 15 0-	—
COPPER.		
Tough cake and ingot	60 0 0-61 0 0	
Best selected	61 10 0- 62 10 0	
Sheets and sheathing	65 10 0- 69 0 0	
Flat Bottoms	68 10 0- 72 0 0	
Wallaroo	63 0 0-	—
Burra, or P.C.O.	62 10 0-	—
Other brands	nom. 60 0 0- 62 0 0	
Chili bars, g.o.b.	54 7 6-	—
QUICKSILVER.		
Flasks, 75 lbs., war.	5 12 6-	—
PHOSPHOR BRONZE.		
Alloys I. and II.	£114 0 0	
,, V.	120 0 0	
,, VI. and VII.	135 0 0	
,, XI., Duro A, Duro B	112 0 0	
BRASS.		
Wire	6¼d.-	—
Tubes	6¾ -	—
Sheets	6⅞-	—
Yel. met. sheath. & sheets	5⅜-5¾d.	
TIN-PLATES.*	per box	
Charcoal, 1st quality	1 1 0- 1 2 0	
,, 2nd quality	0 19 0- 1 0 0	
Coke, 1st quality	0 16 3- 0 16 6	
,, 2nd quality	0 15 3- 0 15 6	
Black, per ton	15 10 0-	—
Canada, Staff. or Gla. at Liverpool	12 0 0-	—
Black Taggers, 450 of 14 × 10	30 0 0-	—

* At the works, 1s. to 1s. 6d. per box less for ordinary; 10s. per ton less for Canada; IX 6s. per box more than IC quoted above, and add 6s. for each X. Terne-plates 2s. per box below tin-plates of similar brands.

REMARKS.—There is no special new feature to record in the state of the Metal Market, and the principal characteristics are still much quietude in the demand both for the ordinary wants of the trade and for speculation, whilst that continued declension in values which has for so long been such a prominent feature in all the markets is still only too palpable in some metals. It may be difficult to assign any particular cause for the continued stagnancy in the demand, the quietude in trade, and the utter want of confidence in any forthcoming improvement in the near future. In fact, there are many features which it would seem ought to goad on business; financial enterprise is easy to arrange, money is cheap and plentiful, the weather is bright and cheerful, business is sound as indicated by the comparative few failures, retail traders have the benefit of buying at cheap prices all round—a state of things which ought to keep them more than usually solvent, and further statistics are not altogether unfavourable, showing in some instances reduced stocks. Yet in spite of all this trade is checked and retarded, the demand prevented from developing beyond the most urgent wants of the trade, and the whole markets made depressed by many an adverse event. Even those features which at first sight appear so favourable point to a bad state of trade. The low prices, the few failures, the cheap money, all indicate that trade is not good; they show a general indisposition to enter into engagements beyond the most urgent and pressing requirements; the low prices display a limited demand, or at the best the demand does not exceed the supply, and the cheapness of money points to the fact that money is not required for fresh enterprise, new schemes, and the general development of trade. Dear money cripples and injures trade, but when reduced below a certain value it shows that trade is slack. Thus far then we have seen the evidences of bad trade, and whilst going further into the subject it may be interesting to fathom the causes of the existing dulness.

In the first place, the minimised profits and positive losses which have been so frequently sustained during the past two years have heartily discouraged operators to have anything to do with the markets more than they are absolutely obliged. Everyone has suffered more or less by the existing depression, but it is worthy of note that the slow crisis through which business has passed has had more ruinous results amongst unwary speculators than amongst regular traders, and therefore the trade is depressed in accordance with a natural backward flow of the tide in commercial affairs, and not from any general collapse of credit. The constantly reduced prices have made almost all manufacturers, holders, and others feel the pinch keenly, but the easy rates of money will facilitate the maintenance and renewal of loans, and thus more confidence may be inspired; at the same time whilst those who have to effect financial arrangements for holding their stocks are benefited by the reduced rates of interest they have to pay for their loans, yet the constantly depreciating value of almost all metals necessitates increased margins, and thus further drawings upon an already diminished capital has only too often to be made. The only metal in which operators will deal at all is tin, it is the only metal that appears at all manageable; others are greatly neglected, and their downward tendency is allowed to proceed unchecked, and with scarcely a single effort made to stay the retrogressive course, and even in tin itself after every little rise sales are again quickly and freely pressed, showing little or no confidence in the maintenance of the market.

COPPER.—Again we have to report an unsatisfactory market for copper, and holders altogether fail in their efforts to stay the downward course of prices. Sellers have not been disposed to make any marked concessions in price; they consider that prices are already low enough, but they have endeavoured to stimulate the demand by being easy in their quotations. This, however, has not proved enough to rouse the market from its dormant condition, and it seems evident, in order to bring about the desired result, some great, thorough, and radical change must be made. Either prices must be materially reduced until trade revives, or there must be a sensible falling off in the supply. It matters not which, but with prices even at present low rates, and the continuance of current supplies, there is something wanting to dispel the existing depression. There is a continuance of large deliveries, and this is a very favourable feature, and shows that a large business has been done, irrespective of that transacted for speculation. But how has that business been carried through? By adding loss to loss.

Prices have, for a long time past, continued to recede, and, therefore, the more sales that have been effected the greater the losses that have been incurred. Unsatisfactory, indeed, is such a revelation, but it is an evident fact. Prices for years have not been so low as they are at present, and, therefore, sacrifice upon sacrifice has been the invariable rule, and now holders, crippled by their losses, discouraged by the falling prices, and disheartened by the gloomy prospects, find that the good deliveries that have been made, instead of lightening our market in diminished stocks, have been the means of overstocking some of our foreign and Colonial markets—that India has ceased to make purchases beyond the most sparing quantities, and that supplies continue to flow in unchecked. The Chili charters for the first half of March were advised on Monday as 1700 tons, and the price in Valparaiso 53*l.* c. and*f.* Liverpool. The imports of Chili produce during the first half of the month have been 2873 tons, and the deliveries only 1698 tons. The imports of other kinds of copper for the same time were 1836 tons, and the deliveries 1530 tons. The total visible stock of Chili produce on 14th inst. was 26,753 tons, against 25,578 tons on 29th ult., being an increase of 1175 tons.

IRON.—This market remains very dull, and the amount of business doing is of a decided limited character. Low prices fail to stimulate the demand, and the reduced production fails to produce more than a most temporary effect upon prices. Most of the works are going only short time, various of them are closing altogether, and several furnaces have been damped down in different parts of the country. This may be, and undoubtedly is, a wise and prudent course to pursue in the present critical state of the market, for it is of no use to continue an excessive production whilst stocks, private if not public, are so rapidly accumulating, but it has a terrible effect upon the employed, and whilst manufacturers and makers suffer considerably from the keen competition, the low prices, and the general depression in the trade, yet there is much sympathy to be afforded the men, who find in some instances that the mills are closed, and they are thrown entirely out of work, in others they can find employment only for short time, whilst the general low prices cause such a curtailment in wages that all hands are more or less influenced by reduced wages on the work which they are able to secure.

The following advices from Scotland are not without their favourable features, for they show the shipments last week to be slightly more than what they were at the corresponding period of the previous year; but taking the total for the whole year the comparison is not satisfactory, for they are much less than they have been during the same time of the two previous years. The demand for makers' iron has been somewhat small, but prices have been fairly steady, and on the whole quotations have been tolerably strong. The Glasgow warrant market opened on Monday with a good deal of disposition being shown to make sales, and prices receded from 42s. 7½d. down to 42s. 4d., but quickly rallied again to 42s. 7d., and closed at 42s. 6d., while on Tuesday the tone was steady, and a fair business was done betwixt 42s. 7½d. and 42s. 6d. On Wednesday there was very little change, the price being 42s. 6¼d. to 42s. 6d., and yesterday there was steadiness, but prices slightly easier, the quotations being 42s. 5d. to 42s. 5½d., and the closing figure this afternoon is 42s. 6d. per ton. The shipments last week were 12,238 tons, against 11,876 tons for the same week of last year, being an increase of 362 tons, and which makes the total shipments for the whole of this year 105,785 tons, against 116,980 tons for the same time of last year, and 122,795 tons for the similar period of 1882. There are now three furnaces less in blast, the total being 94 against 97 a week ago; but the public stocks show very little change, and amounts to 594,042 tons against 594,059 tons last week, thus showing that with the reduced number of furnaces in blast the production is still ample to meet the requirements of the trade.

The imports of Middlesborough pig iron into Grangemouth last week were 5335 tons, against 1720 tons for the corresponding week of last year, being an increase of 3615 tons, and which makes a total increase for the whole of this year, compared with last, of 11,639 tons. There has been a better feeling upon the Middlesborough market, the enquiry has improved, the feeling strengthened, and prices are higher, No. 3 showing an advance of about 3d., and No. 4 6d. per ton, the present rate for the former being 37s. 3d., and for the latter 35s. 9d., both for sharp delivery. The shipments last week were only about 16,000 tons, but an improved trade with the Continent is anticipated. Hematite iron is in dull demand at 47s., warrants at 10s. less, and the public stock shows a reduction of 273 tons for the week. In manufactured there is very little doing, and low prices continue to be quoted. The price of bars is 5*l.*; angles, 4*l.* 15s.; and shipplates, 4*l.* 17s. 6d. to 5*l.*, whilst puddled bars can be bought at 65s. The trade at Wolverhampton is in a very unsatisfactory state, and many masters prefer to let their mills stand idle rather than accept present unremunerative prices. Sheets are quoted at 7*l.* 12s. 6d.; doubles and lattens at 3*l.* 12s. 6d. per ton. Galvanised iron can be bought at 12*l.* 5s., plates at 7*l.* 10s., boiler-plates at 8*l.* 10s. to 9*l.*; and with regard to pigs, there is an unimproved demand at 44s. for Northamptons, 45s. for Derbyshire, and 40s. for Staffordshire cinder pigs. The Birmingham advices show that the trade in South Staffordshire is very dull; and, while no definite decision has yet been come to with regard to reduced make, yet individual firms are curtailing their output, particularly manufacturers of sheets. Prices have undergone scarcely any alteration, but the market is a little unsteady, owing to the notice given by masters for a reduction of wages.

TIN.—For the most part this market has shown a hardening tendency during the past week, and prices have continued to advance daily. The rise that was effected last week was speedy, animated, and excited, and was not long sustained; but the improved turn which has now again been effected has been characterised by greater steadiness, and may, therefore, perhaps prove of longer duration. When prices are pushed up by fits and starts and wide fluctuations it is rarely that a sharp reaction does not soon follow, being made the more sudden according to the rapidity of the previous advance; hence we find that the market lost nearly all that it had gained after the spirited advance of last week. But again the turn has been made in an upward direction, and although rather rapid it has not been attended with that excitement which was so prominent a feature at the previous enhancement; so that its permanency is more probable, though of course there may, and probably will be, adverse fluctuations. There is, however, a fair chance of some little activity in this market. It is the only metal that operators care to turn their attention upon; it is not depressed and weakened like other metals, the legitimate demand is fairly good, stocks are tolerably light and well managed, and there is a desire to make up for the general deficiency in business by operating in tin. The official quotations fairly represent the market during the past week, and on Monday the lowest cash prices quoted for foreign tin are 82*l.* 5s., on Tuesday 82*l.* 7s. 6d., on Wednesday 82*l.* 17s. 6d., Thursday 83*l.* 7s. 6d., and to-day at 83*l.* 15s. per ton. A fair business has also been done for forward prompts, and prices have ranged from 15s. to 20s. per ton above those quoted for cash parcels.

SPELTER.—Since our last spelter has been a little firmer, and up to 14*l.* 12s. 6d. has been paid for ordinaries; but the market is now quieter again, at 14*l.* 10s. for ordinaries.

LEAD is dull, and down to 11*l.* has been accepted for Spanish, and sellers over, while English is quoted at 11*l.* 7s. 6d. to 11*l.* 12s. 6d. per ton.

STEEL.—The market remains very quiet, and business keeps most limited in almost all branches.

TIN-PLATES.—Only a small business is doing, and prices although easy are nevertheless without quotable change.

QUICKSILVER has been very dull throughout the week. Importers' price is unchanged, but sales are being made from second hands at 5*l.* 10s.

The MINING SHARE MARKET continues somewhat dull and depressed, and there is a general absence of business. This, however, is not confined to mining, for complaints are general as to the want of activity on the Stock and other Exchanges. A rise in metals or a good discovery or two in mines would bring in buyers, but both these wants seem a long time in coming. The mines dealt in comprise Dolcoath, East Pool, Wheal Crebor, West Kitty, East Blue Hills, Wheal Agar, South Frances, West Frances, and a few others.

TIN has been firmer, though the rise to 85 has not been fully maintained. In the standard for ore no change has been made since Jan. 7. There is rather more doing in tin shares. Blue Hills are quoted ¼ to ⅜; Carn Brea, 2¼ to 3¼; Cook's Kitchen, 10 to 11. Dolcoaths have been firm, and leave off 67 to 69. East Pool, 37 to 39; East Lovell, ¾ to 1; Killifreth, ¼ to ½; New Kitty, 1⅜ to 1⅝; South Condurrow, 8½ to 9; South Frances, 6½ to 7 (call of 5s. paid); Tincroft, 3¼ to 3¾; West Basset, 2 to 2½. West Frances, 7 to 8; this mine continues to look well. Wheal Basset, 2¾ to 3⅛; South Kitty, ⅜ to ⅝. East Blue Hills, ¼ to ⅜; at the meeting, particulars of which will be found in another column, the accounts showed a balance in hand of 658*l.* 5s. 5d., and no liability whatever beyond the current month's costs, merchants' bills and royalties being paid up monthly.

Since the last meeting the tin sold realised 851*l.* 13s. 4d. Altogether the tin sold from the stopes above the adit have realised 3008*l.*, and a great deal of dead work has been done, particularly in sinking a shaft from the surface to the 50 to open out a permanent mine. This shaft is now down a few fathoms below the 50 in a lode worth 15*l.* to 20*l.* per fathom, and will be down to the 60 in about three months. North Blue Hills, 1s. to 2s.; the accounts here show a balance in hand of 156*l.* 3s. 8d., without any liabilities. At present the operations are confined to a promising tin lode, and the funds in hand will enable the works to be carried on for four or five months without any call upon the shareholders. Wheal Kitty (St. Agnes) ⅜ to ⅝. Wheal Uny, ¼ to ½. Wheal Grenville, 4⅜ to 5½; at the meeting the accounts charging 16 weeks' costs against 14 weeks' returns show a profit of 204*l.*, and a credit balance of 1391*l.* out of which a dividend of 2s. 6d. per share was declared. The tin sold (119 tons) realised 5997*l.* All costs, including, merchants' bills, are paid up, and the only liability is the lords' dues of 199*l.* 18s. 2d. The agents hope to sell about 100 tons of tin during the next 12 weeks.

At West Poldice meeting the accounts showed a loss of 1245*l.* on four months' working, and a debit balance of 2500*l.* A call of 5s. per share (1297*l.*) was made. The tin sold (22 tons) realised 917*l.* Wheal Agars have been in demand, at 12 to 13; a dividend is expected at the meeting. At Phœnix and West Phœnix meeting a call of 2s. 6d. per share was made. The loss on four months' working was 379*l.* The tin sold realised 756*l.* Drakewalls, 4s. to 5s.; New Trumpet, 1 to 1⅛; Polberro, 1¼ to 1⅜; Tresavean, ⅜ to ½; Goodevere, 1 to 1⅛.

COPPER.—At the Cornish Ticketing, on Thursday, the standard for ore declined 30s. The average price of the ore sold was 2*l.* 18s. 6d.; standard, 89*l.* 7s.; average produce, 6⅜. Bedford United, 1¼ to 1⅜; the sale of ore here (185 tons) brought 70*l.* 7s. 6d. Devon Great Consols, 3 to 3⅛; the ore (870 tons) realised 1732*l.* 15s. 6d. Gunnislake (Clitters) sale (185 tons) brought 95*l.* 15s., averaging over 5*l.* per ton. Prince of Wales, ⅜ to ½; the sale here (72 tons) brought 21*l.* 19s. 6d. South Caradon, ⅛ to ¼; the sale here (295 tons) brought 127*l.* 8s. The best parcel (25 tons) brought 10*l.* 1s. per ton. At Devon Great United the sale (65 tons) brought 24*l.* 12s. 6d. West Seton, 3⅜ to 4¼. Marke Valley, ¼ to ⅜; the sale of ore here (60 tons) realised 18*l.* 10s. East Caradon sale (40 tons), 15*l.* Wheal Crebor, 1½ to 1⅝; the 144 west is worth 13 tons of ore and 3 tons of mundic per fathom; stope in back, 8 tons ore and 4 tons of mundic; winze below 134, 8 tons of good ore per fathom. New Cook's Kitchen, 1½ to 2. West Crebor, 2s. to 2s. 6d.; the indications at the mine are encouraging for an early improvement. New Caradon, 4s. to 6s.; Old Gunnislake, ⅜ to ½. Devon Friendship, 2s. to 3s.; the 42 east is worth 16*l.* per fathom.

LEAD mines continue inactive and quotations merely nominal. Vans are quoted 2 to 3; Great Laxey, 9½ to 10½; Roman Gravels are weaker at 4½ to 5; Tankerville Great Consols, 1s. to 2s. South Darren, ⅝ to ¾; the 130 east is worth 15 cwts. per fathom. Coed-y-Fedw, 1¼ to 1½; Leadhills, 2⅜ to 2⅝; Old Shepherds, 19s. to 21s. Pennant, 4½ to 5; Sinclair, 1 to 1½; West Holway, ¾ to 1¼; Weardale, 1¼ to 1½.

FOREIGN MINES.—There has been more business doing in foreign than in home mine shares; but even in these there is not much activity. Akankoo are quoted 5-16ths to 7-16ths; Alamillos, 1½ to 1⅝; Almada and Tirito, ¼ to ⅜; Anglo-African Diamond, 1½ to 2½; Asia Minor, ½ to ⅝; Birdseye, 1 to 1½; Bratsberg, 1⅜ to 1⅝; Callao Bis, 7-16ths to 9-16ths; Cape Copper, 43 to 45; Chile Gold, ¼ to ⅜; Colombian Hydraulic, ¼ to ⅜; Colorado United, 2½ to 2⅝; Copiapo, 2⅜ to 3; Fortuna, 2¼ to 3; Frontino and Bolivia, ⅛ to 1⅜; General Mining, 7 to 7½; Kapanga, 3-16ths to 5-16ths; Lake Superior Native Copper, ¼ to 1⅜; La Plata, ¼ to ⅜; Linares, 2½ to 3; Marbella, 3½ to 4; Mason and Barry, to bearer, 11½ to 11⅝; Michipicoten, ½ to ⅝; Montana, 3 to 3½; New Emma, ⅜ to ⅝; New Potosi, ⅛ to ¼; Nouveau Monde, ⅛ to ¼; Organos, ⅜ to ½; Orita, ⅜ to ⅝; Panulcillo, 4⅜ to 5½; Quebrada Radway, 4½ to 5.

Richmond, 3½ to 4; Rio Tinto bonds to bearer, 101 to 103; ditto, shares, 18½ to 19½; Ruby and Dunderberg, ½ to ⅝; Scottish Australian, new, 1½ to 1⅝; South Australian Mines, ¼ to ½; St. John del Rey, 50 to 60; Tharsis, 6 to 6½; Tolima, 7½ to 8½. United Mexican, 9½ to 9⅝; the excess of returns over outlay in the mine of San Cayetano de la Ovejera for the week ended March 15 was $4000. West Callao, ¼ to ⅜; Western Andes, 4½ to 5.

The Market for Mine Shares on the Stock Exchange has fairly maintained the improvement noticed at the close of last week. There has, however, not been a large amount of business doing, and in many cases prices are lower; but the transactions that have taken place are of a more legitimate character, that is to say the shares have been asked for or offered for sale, and the bargains have been closed without the necessity for lengthened negociations such as for some time past have been the general rule. The prices of metals continue to fall, and there is an almost utter absence of demand for tin, copper, or lead, either for consumption or speculation. The recently started companies seem to have been successful in obtaining the required capital; the Hungarian Gold Company has issued its letters of allotment, and Great West Shepherds has also closed its lists, it being reported that in this case some letters of regret will have to be sent out, but this may be only a metaphor used to imply that the anticipated number of shares have been placed. To-day the market has been quieter but close without the depression which has recently been but too general.

Our usual telegram from Cornwall this evening says:—During the past week the Cornish Mine Share Market has been rather quiet, but without any giving way in prices. The tin market remains firm, and the deliveries good, so that a change at any moment may occur. Dolcoaths, East Pools, and Agars continue very firm. A considerable profit is anticipated at Agars next meeting. West Bassets and South Frances have been in demand, and more attention has been given to Wheal Basset now it is paying cost. There has been enquiries for Tincroft and South Crofty. In the latter a change for the better is considered very probable by next meeting. South Frances meeting was held yesterday, a loss of 1066*l.* being shown, and a 5s. call made. But for one of the richest pieces of ground having been flooded a considerable profit would have been shown. At West Poldice a loss of 1245*l.* was reported, 5s. call made. The lords have remitted dues during pleasure. At Truro yesterday 2033 tons copper ores realised 5928*l.*, the standard declining 30s. Next sale at Redruth April 3, quantity, 705 tons.

The Pinos Altos (Mexico) Mining Company, with a capital of 250,000*l.*, in shares of 1*l.* each, the prospectus of which will be found in another column, is a reconstitution of the undertaking incorporated under the same title in 1879, and formed for the purpose of acquiring and working a very valuable gold and silver mining property, situate at Pinos Altos, in the State of Chihuahua, Mexico. The original company consisted almost wholly of the present directors and their friends, who, before inviting the public to take part in the enterprise, have determined to prove the value of the mines, and make them a paying concern. Among the grounds upon which the company claims the support of capitalists are that the mine is in full work; the property is of proved value, the shaft being down over 700 ft., that the average bullion return for past two years has been 49,500*l.*, that the estimated profit after the improvements are completed is 42,500*l.* per annum, and that these improvements will occupy only nine months; that the amount expended by old company is 200,000*l.*; that the preference shares (150,000*l.*) are offered for subscription, whilst the remaining (100,000*l.*) ordinary shares are taken by old shareholders; and that out of the proceeds of issue, after setting aside sufficient for further working capital, 110,000*l.* will be applied in discharging the debts of the old company, and that should the subscription not be sufficient to meet these the creditors have agreed to take preference shares for any deficiency. The old company, moreover, has agreed to pay all expenses up to allotment. The enterprise is more fully alluded to in another column.

Devon Great Consols, 3½ to 3⅝; the sale of copper ore (870 tons) realised 1732*l.*, upwards of 7*l.* per ton being obtained for one parcel of 60 tons. Good progress has been made during the past week throughout the mines. The 112, east and west, at Watson's, has been driven 4 ft. 6 in. each way; the lode, which is 3 to 4 ft. wide, yielding 2 tons of copper and mundic ores to the fathom. The Railway shaft has been sunk 8 fms. below the 205, the ground looking well for the production of mineral.

Devon Great United, ⅜ to ½; the lode in the 120, east of Willesford's, continues fully 5 ft. wide, and producing good quality copper and mundic ores. In the winze below the 104, west of Willesford's, the lode is 3 ft. wide, and for length of winze (9 ft.) is worth 6 tons of copper ore per fathom. The sale of copper ore (65 tons) on Thursday last, realised 295*l.* 12s. 4d.

Dolcoath shares have been in demand all the week, leaving off at 67½ to 68½; due, it is said, to the improved prospects of the mine, and the expected increase in dividends. New tin ground is being opened up, which is stated to be very productive.

Ectons, 2 to 2½; the manager reports that another branch of copper has been cut in driving north-west upon Vivian's vein, which is a very important point, seeing that the distance driven is just about the estimated length for crossing Quarry vein; the character of the formation is also better than anything seen in the drivage. Good progress has been made both underground and at surface, and all the ends of operation have more or less improved.

Kit Hill, ¼ to ½; the distance driven at the Great Tunnel level during the past week has been 2½ fms. In the north engine-shaft the lode is 6 ft. wide, producing tin ore, and in the 68 east and west the lode part carrying from 4 to 5 ft., presents good indications of mineral.

South Devon United, ¼ to ½; the lode at the 123 (Martin's shaft) continues from 5 to 6 ft. wide, and worth 12*l.* per fathom. At the eastern end the lode is fully 5 ft. wide, and worth about 5*l.* per fm.

South Frances shares have been in demand, and are 6¾ to 7½; at the meeting of shareholders, held on Thursday, the accounts showed a loss of 1066*l.*, and a call of 5s. per share was made. The mine is looking well, and it is satisfactory to note that all liabilities are entered close up, while credit is taken only for such ore as is actually sold.

Wheal Agar shares have been in demand at 13 to 13½, and it is anticipated that a good profit will be shown at the forthcoming meeting of adventurers.

South Australian Copper Mines, ¼ to ½; it is reported that at the Blinman Mine an important discovery has been made. Some time back, writes a correspondent, an account was given of the discovery made in sinking the 60 winze of a large vugh, the sides of which were coated with native copper. Little could then be done to further explore it until the 70 was driven far enough to reach it. This has now been accomplished, and the cavity appears to extend som 42 ft. in length, and in places it opens out as wide as 18 ft., and is 20 ft. in depth. On blasting out one side of it the lode is found to be disseminated throughout with sulphuret ore, coated with black oxide, that assays 35 per cent. A deposit of richer ore has also been discovered. A sample parcel of 100 bags has been sent to the smelters, which, it is expected, will yield 50 per cent. The importance of this discovery on the future returns of the mine may be very great, and the reports by the next and following mails are awaited with great interest.

California Gold, 9-16ths to 11-16ths; the usual report has not yet come to hand, having been delayed in transmission.

Colorado United, 2⅜ to 2⅝; the information foreshadowed in the *Mining Journal* of March 8 with reference to a very extensive ore body or bonanza cut in this mine was last week officially confirmed, and it will now be of interest to those concerned to know

the cause of such an unusual improvement. It appears that the fact of the lode having improved from 3 to 6 ft. in width is accounted for by the confluence or junction of the Dunderberg, and other lodes at a short distance east of the present workings. "With reference," writes a correspondent, "to this Dunderberg, the workings upon which are situated but 500 ft. from the present discovery, $500,000 was taken out of a small piece of ground only 100 ft. in length, and the valuable chute from which this sum was taken is known to have dipped west into the Colorado United Company's grounds, who have now in the end of their 13th drift reached the rich body of mineral which the Dunderberg Company cut at only 60 ft. from surface. Caunter lodes similar to the Dunderberg are of great value to miners, as they invariably exercise a powerful influence for good on their neighbours. It is a geological fact that the great caunter lode made the Dolcoath Mine, without which the adventurers would never have reaped the harvest they have gathered for many years past."

Kohinoor and Donaldson, ⅜ to ½; the weekly report, owing to some delay in transit, has not yet been received.

Ruby and Dunderberg, ½ to ⅝; the weekly report does not advise any change of moment at the Home Ticket Mine, but at the Lord Byron the seam of ore mentioned in last week's report proves to be 1½ ft. wide, of extra quality; as soon as the tunnel has been connected with the cave at the bottom of the shaft this discovery will be prospected, and it is thought it may lead to something very good. The telegram received on Tuesday advises that the roads are still in bad order, but the snow was disappearing, and it is hoped that in a week or two shipments of ore from all the mines may be resumed on a considerable scale.

Callao Bis, 7-16ths to 9-16ths; the directors have received advices from the mines dated Jan. 30, in which it is stated that the quartz vein discovered in the western drift has been struck in sinking the No. 3 shaft as expected. This is considered important, as the vein can now be followed without difficulty.

Organos, ⅜ to ⅞; some demand is reported to have arisen during the week for these shares at improved prices. The reports from the mine continue satisfactory, and leave little doubt in the minds of those interested that the company will ultimately prove successful. The returns, though small, having been limited by the means of taking the quartz to the mills, have been good, and tend to show that the mine when worked on a larger scale will prove profitable. The tramway, upon which alone the increase of the crushings appears to depend, will probable be completed in the course of a couple of months. There are 24 heads of stamps, but the manager writes, that so soon as the tramway referred to becomes completed, the Socorro lode will produce a sufficiency of quartz to keep in full work four times the number of stamps now erected at the mines.

Orita, 14s. to 16s.; the works at this mine are progressing in a satisfactory manner, and it is anticipated that in the course of another couple of months or so washing will be commenced. The opinion is expressed that, in view of the large scale upon which operations are about to be conducted, the mine should immediately prove profitable, and it may be worth while to remember the statement of the manager of the adjoining mine—that, within six months from the completion of the works, the mine should return in dividends the whole of its capital to the shareholders.

Schwab's Gully (Diamonds), 8 to 8½; the reports received are described as "very satisfactory, and, from private advices to hand, it is believed that the coming quarter's dividend to be declared in April will exceed past, and be over 20 per cent. per annum. These 10*l.* shares, therefore, appear cheap at a discount of 40s., for, with the present enquiry and advance, is almost certain, as very few share are held here. Very good investment buying has been going on during the past week."

Asia Minor, ¼ to ½; advices dated March 1 from the mine state that 50 tons of silver-lead ore had been shipped during the previous month, and that the mines were producing ores of a very good quality. The two last shipments of ore sold at Liverpool realised 15*l.* 11s. per ton.

The London and South African Exploration Company (Limited) have advice of remittances amounting to 2500*l.* for the last four weeks, making, with the 9700*l.* previously advised, a total of 12,200*l.* for 12 weeks.

In Lead Mine Shares there has been virtually nothing doing, and quotations are purely nominal. Roman Gravels, 5 to 5½; a sale of lead ore took place on Thursday, but there seems to be some question as to who purchased one of the parcels, so that the amount will be given next week. Various points throughout the mine are yielding good ore. Tankerville, ½ to ¾ (ordinary shares); a sale of 30 tons of lead ore from the Bog portion of the mines realised 196*l.*, and 45 tons of blende have been sampled for sale on Thursday next.

The letters of allotment in the Hungarian Gold and Silver Reduction Works (Limited) were posted on Thursday.

The Rhodes Reef Gold Mining Company directors, availing themselves of the opportunity afforded by the visit to India of Mr. Carnegy, one of their colleagues, requested him to inspect the company's property, with the assistance of a professional expert, and to report on the prospects of eventual success, which recent advices showed to be unpromising. Mr. Carnegy is expected to leave India for England about March 28, and as soon as possible after his return, and the receipt of his report, the directors purpose calling a general meeting.

The American Investment Trust Company's report for the meeting on Thursday next shows that the net income, after the deduction of this amount and the year's expenses, is 59,611*l.* 8s. 6d., to which is added 860*l.* 15s. 3d. brought forward from last year, making a total sum available for distribution of 60,472*l.* 3s. 9d. The board recommended that this sum be distributed as follows;—On the preferred stock dividend at 5 per cent. for the year—interim dividend for the half-year ended September already paid, 12,500*l.*; dividend for the half-year ended March, 12,500*l.* = 25,000*l.*: and on the Deferred Stock interim dividend at the rate of 5 per cent. per annum paid on account for the half-year ended September, 12,500*l.*; proposed dividend at the rate of 9 per cent. per annum for the half-year ended March being, with the above interim payment, a dividend of 7 per cent for the year, 22,500*l.*: total, 35,000*l.*; carrying over a balance of 472*l.* 3s. 9d.

The Foreign, American, and General Investments Trust Company report for the meeting on Thursday next shows that the net income available for distribution is 31,686*l.* 3s. 4d., after deducting the year's expenses and allowing for the 4 per cent. interest on the 10,000 shares issued and allotted at 4s. per share premium since the first report was issued. The board recommend that this sum be distributed on the preferred stock dividend at 5 per cent., interim dividend from the due dates of the several instalments to September already paid, 6795*l.* 16s. 6d.; dividend for the half-year ended March 15, 8750*l.* = 15,545*l.* 16s. 6d.; and on the deferred stock interim dividend at the rate of 4 per cent. per annum paid on account from the due date of the several instalments to September, 5439*l.* 11s. 10d. Proposed dividend at the rate of 6 per cent. per annum for the half-year ended March 15, being with the above interim payment a dividend of 5 per cent. for the year, 10,500*l.* = 15,939*l.* 11s. 10d.; carrying over a balance of 200*l.* 15s.

Notice is given that the coupons, due April 1, on the Alabama, New Orleans, Texas, and Pacific Junction Railways Company (Limited), issue of 1,500,000*l.* First Debentures, will be paid on and after that date, at Messrs. Glyn, Mills, Currie, and Co.'s.

At the Stock and Share Auction and Advance Company's sale, on Thursday, the prices among others obtained were:—Kapanga Gold, 5s.; Hoover Hill Gold, 5s.; North-Western of Uruguay Railway Ordinary, 5s. 6d.; Royal Aquarium, &c., Society, 2*l.* 5s.; Tamar Silver-Lead, &c., Company, 4s.; Tasmanian Main Line, Pref., 22s.; Lisbon-Berlyn (Transvaal), 15s. paid, 14s. 6d.; Mine Reefs Gold Mine, 4s.

The Almada and Tirito Company's agent at Guaymas (Mexico)—Mr. A. Willard—writes (Feb. 27) that he has heard good reports from the mines lately, and that there is a fine body of ore in sight, which promises large returns.

COAL MINING IN ASSAM.—The month of February saw the opening of the coal industry of Assam through the instrumentality of the Assam Railway and Trading Company, and Mr. Elliot, the Chief Commissioner of that province, after a personal inspection bore his high testimony as to the material benefit which must accrue from the development of so important an industry, which he said was not only calculated to reduce the cost of the manufacture of tea and the lowering of river freights but must in other ways add considerably to the prosperity of the province. The manner in which the collieries were being worked, and the energy that had been displayed in overcoming the many difficulties which had beset the company, he considered, gave the greatest credit to all concerned. Mr. Benjamin Piercy, the representative of the company, in speaking at the luncheon given on the occasion, dwelt at some length on the rise and progress of the enterprise, and said that he looked forward with the most sanguine spirit to future results. The properties inspected by the Chief Commissioner belonging to the company were those of the Ledo Colliery and the Thikak Mine, but not permitting a visit to the Thikak Colliery, which is stated to be the finest of the two now worked.

OLD SHEPHERDS.—Latest advices from the mine report that the water has now been let down at the 102, and that the silver-lead ground expected has been proved to be standing here and is found to be richer than anticipated; also that the bearers and cistern are fixed, consequently operations will forthwith be carried on with great ease right away to the 110, which is generally known to be the richest part of this historical mine.

WHEAL BENNY.—The secretary of the company claiming this mine denies that last week's quotation was sent from the company's office, and states that Mr. Brewis, who is endeavouring to make a market for the shares, is alone responsible for it. The quotation was received from Mr. Brewis, but it was supposed that Mr. Brewis was the company's representative. The shares are quite unknown in the general market. Mr. H. Reynolds has sent a long letter in reply to that of Sir Charles W. Craufurd in last week's *Mining Journal*, but it is too personal for publication. There appears to have been considerable irregularity in the dealings between the lessor and the lessees, or provisional lessees, since 1872, and in the present temper of the parties a good prospect of litigation; but as the property really seems to be worth working it is to be hoped that some compromise or arrangement may be effected which will give all who have had a share in opening or directing attention to the lodes a share also in the profits to be realised. An amicable settlement would be far better than litigation, and if there be only a moral claim it is sometimes better to recognise it. The shares will not again be quoted until they be regularly dealt in on the market, except upon the signed statement of the secretary that *bona fide* transfers have been registered at the price he quotes.

WHEAL COATES.—An exceptionally good report from this mine has, says a correspondent, been received this week, and speaks for itself. The shares of the property have been long neglected, but if the present increased productiveness continues a corresponding advance in the market value must follow as a matter of course.

GOLD AND SILVER.—Messrs PIXLEY and ABELL (March 20) write:—There qas been but little demand for gold during the week, and the imports, which have been very large from America and the Continent, have been sent into the Bank, the total so disposed of being 1,426,000*l.* As the exchanges from the United States keep high, futher shipments may be looked for. We have received 850,000*l.* from the United States, 493*l.* from the West Indies, and 24,910*l.* from the Brazils = 879,840*l.* The Elbe takes 500*l.* to the West Indies. Owing to lower exchanges from the East, the price of silver bars declined, and the amount by the West India steamer was sold at 50 7/16d. per oz. A slight rise in values has since taken place, the arrivals having been small and the Indian exchanges having somewhat improved, and the nearest quotatiou we can give to day is 50 15/16d. per oz. The amounts to hand comprise 14,990*l.* from the West Indies, 5700*l.* from the River Plate, and 42,000*l.* from the United States = 62,000*l.* The Elbe has taken 12,320*l.* to the West Indies, and the P. and O. steamer 55,000*l.* to Bombay. The quotations for bullion are:— Bar gold, fine, 77s. 9d. per oz. standard; bar gold, containing 20 dwts. silver, 77s. 10½d. per oz. standard; Spanish doubloons, 73s. 9½d. to 73s. 10d. per oz.; South American doubloons, 73s. 8½d. per oz.; United States gold coin, 76s. 3½d. per oz. Bar silver, fine, 51 15/16d. per oz. standard; bar silver containing 5 grs. gold, 51 5/16d. per oz. standard; cake silver, 54 3/16d. per oz.; Mexican Dollars, 49 5/16d. per oz. Quicksilver, 5*l.* 10s.; discount, 3 per cent.

STEEL FOR SHIPBUILDING.—Steel shipbuilding upon the North-East Coast should receive considerable impetus from experiments which Lloyds' Register Committee have just concluded as to the suitability of basic steel for ship construction. Two of their principal officers (Mr. William Parker and Mr. H. Cornish) have recently been busily engaged in testing angles and plates rolled by Messrs. Donnan and Long, of Middlesborough, from material made by the North-Eastern Steel Company by the basic process. They subjected the material to tensile tests, hot and cold bending tests, and temper tests. Further, they took some of the angles to a neighbouring shipbuilding yard, heated, then bent, levelled, and subjected them to the same treatment that a ship's frame would undergo in the ordinary course of shipbuilding. As the result of these experiments they have reported to the committee of Lloyds' that, so far as the requirements of Lloyds' Register is concerned, steel made by the basic process is equal to steel produced by the acid or hematite processes. In accordance with these recommendations, the committee have now informed the North-Eastern Steel Company that such metal may be used for ships built under the inspection of their surveyors to class in their society, subject, of course, to the usual tests applied to steel-plates and angles.

COPPER ORES.

Sampled March 5, and sold at the Royal Hotel, Truro, March 20.

Mines.	Tons.	Price.	Mines.	Tons.	Price
Devon Great Consols.	108	£1 9 6	Bedford United	79	4 9 6
ditto	105	1 6 6	ditto	74	3 16 6
ditto	101	1 6 6	ditto	32	2 0 6
ditto	95	1 6 6	Gunnislake (Clitters).	93	5 3 0
ditto	94	1 6 6	ditto	92	5 3 0
ditto	91	1 3 6	Holmbush	102	1 18 0
ditto	81	1 5 0	ditto	38	1 0 0
ditto	79	1 5 0	Gawton	74	0 7 6
ditto	60	7 3 0	Prince of Wales	55	2 15 6
ditto	31	5 16 0	ditto	17	3 11 0
ditto	25	5 7 6	Devon Great United	65	3 16 6
South Caradon	68	4 1 6	Marke Valley	60	3 1 6
ditto	85	3 12 6	East Caradon	40	3 19 0
ditto	54	3 15 6	Mid-Devon	30	4 3 0
ditto	43	3 10 6	Collacombe Consols	17	4 14 0
ditto	25	10 1 0			

TOTAL PRODUCE.

Devon Great Con.	870	£1732 15 6	Prince of Wales	72	£ 212 19 6
South Caradon	295	1273 8 0	Devon Great Uni.	65	248 12 6
Bedford United	185	701 7 6	Marke Valley	60	184 10 0
Gunnislake (Clit.)	185	952 15 0	East Caradon	40	158 0 0
Holmbush	140	231 16 0	Mid-Devon	30	124 10 0
Gawton	74	27 15 0	Collacombe Con.	17	79 18 0

Average standard ..... £ 89 7 0 | Average produce 6 3/16
Average price per ton £2 18 6
Quantity of ore ..... 2033 | Quantity of fine copper, 128 tons 19 cwts.
Amount of money ..... £ 5928 7 0
LAST SALE.—Average standard, £ 89 13 0 | Average produce 6 3/16
Standard of corresponding sale last month, £ 92 5 0 | Produce, 6

COMPANIES BY WHOM THE ORES WERE PURCHASED.

Names.	Tons.	Amount.
Vivian and Sons	434 2/3	£1375 8 11
P. Grenfell and Sons	266	859 18 10
Nevill, Druce, and Co.	343 1/6	728 16 6
Williams, Foster, and Co.	421 1/3	1225 3 2
Elliott's Metal Company	295 1/3	1036 0 3
Charles Lambert	172	702 19 4
Total	2033	£ 5928 7 0

Copper Ores for sale on Thursday week, at Tabb's Hotel, Redruth.—Mines and parcels.—Mellanear 515—Wheal Coates 68—Camborne Vean 55—West Seton 45—West Tolgus 22.—Total, 705 tons.

At Truro Ticketing, on Thursday, 2033 tons of ore of 6⅜ average produce, and containing 128 tons 19 cwts. of fine copper, were sold for 5928*l.* 7s. 0d., being 2*l.* 18s. 6d. per ton of ore, 9s. 4d. per unit, or 46*l.* 13s. 0d. per ton of fine copper in the ore, and an average standard of 89*l.* 7s. Subjoined are the particulars of the two last sales.—

Date.	Tons.	Standard.	Produce.	Per ton.	Per unit.	Ore copper.
March 6	760	£89 13 0	6⅛	£2 13 6	9s. 3d.	£46 3 6
„ 20	2033	89 7 0	6⅜	2 18 6	9 4	46 13 0

Compared with the last sale the decline has been in the standard 1*l.* 10s., and in the price per ton of ore about 2s.

TANKERVILLE GREAT CONSOLS COMPANY (LIMITED).

Notice is hereby given, that an ORDINARY GENERAL MEETING of the shareholders in the Tankerville Great Consols (Limited) will be HELD at the Registered Office of the company, No. 8, Austin Friars, in the City of London, on WEDNESDAY, the 26th day of March instant, at Twelve o'clock noon precisely, for the purpose of receiving the directors' report and statement of accounts, and hearing the decision of the lords as to modifications of the existing covenants of the leases, and for doing and transacting all such other business as may be incidental to the business of an Ordinary General Meeting.

By Order, J. H. MURCHISON, Secretary.

8, Austin Friars, London, 12th March, 1884.

The directors trust that all shareholders will make an effort to be present at the meeting, as it is very important that there should be a full attendance. To provide, however, for cases of unavoidable absence, a Form of Proxy is enclosed, which it is requested may be signed and returned to the office not later than the 22nd instant. Personal attendance would, of course, revoke the Proxy.

LEAD ORES.

Date.	Mines.	Tons.	Price per ton.	Purchasers.
Mar. 15	Pierrefitte	70	£11 16 6	Quirk, Barton, & Co.
20	Roman Gravels	100	6 15 6	Walker, Parker, & Co.
—	ditto	50	6 15 6	Panther Lead Co.
—	ditto	50	7 1 0	Runcorn Company.
—Tankerville Great Consols:—				
	Bog	30	6 11 0	Panther Lead Co

BLACK TIN.

The Tregontrees and Old Polgooth Consols Company sold for the last four weeks' working 2 tons 8 cwts. 0 qr. 25 lbs.; value, 122*l.* 3s. 4d.

Notices to Correspondents.

JAPANESE COINAGE.—"H. J." (Edinburgh): The yen may be regarded as the dollar, and is worth 3s. 4d.; there are 100 sen in 1 yen, and 10 rin in 1 sen, so that the sen is equal to about 4-10ths of 1d., and the rin is equal to 1-25th of 1d. Japanese statistics being given in yen it is only necessary to divide the figures by six to convert them into pounds sterling. The gentleman mentioned is still, we believe, connected with Dai Gakku, but there is naturally a disposition, at least, so the professors say, to replace foreigners by natives when equal efficiency can be obtained with the latter; we have, however, never heard of any unfair or even ungentlemanly conduct towards foreigners in the employ of the educational department.

WIRE ROPES FOR WINZES.—Please correct a slight error which crept into the second line of the second paragraph of my letter, published on March 8—instead of "they were more," &c., read "they *wear* more," &c.—J. ROBERTS, M.E.: *Llanrwst, March* 18.

MISSING MINE REPORTS.—Can any of the readers of your Journal kindly inform me what progress the Mackay and Revolution Silver Mining Company are making. I have not heard any tidings of them for a long time. I have written to the secretary, but received no answer. I never see them in the list of mines in the *Mining Journal*. Perhaps some of your readers will kindly inform me. —J. M.

WORK ON ASSAYING.—Some time since I saw a book, the name of which I do not recollect, at Mr. H. H—'s., Linares, Spain, giving instructions for testing minerals. For instance, you have a stone which you think contains nickel, you first powder the mineral and then put it into a small test tube, you then add one of the acids, when it will give a certain colour, you then add a second acid, and if it contains nickel it will turn a blue or purple colour. In case you have such a book will you kindly let me know, and the price thereof.—H. D. [You probably refer to a work on Volumetric Analysis; but as you do not even state the language in which the book was printed or its size, it is difficult to give you a satisfactory answer. Try Sutton's Volumetric Analysis, published by Churchill we believe; or Bolley and Paul's Technical Analysis, published by Bell and Daldy.]

RELINQUISHMENT OF SHARES—"E. H. G." (Westbourne Avenue).—It was decided in the Bodmin Mines case (26 L.J. Ch. 570) that where the relinquishment is an absolute surrender of the shares into the hands of the company of all the relinquishing adventurers' interest in the concern it may be in any form. The 22nd section of the Stannaries Act makes no alteration in this respect. The fraction means that you cannot relinquish half a share and retain the other half. If you write:—"I ——— do hereby relinquish and absolutely surrender for the benefit of the continuing adventurers, all my 37 parts or shares of and in the mine or adventure called (Wheal Disappointment), situate in the parish of (St. Blazey), in the county of (Cornwall), with all interest in the mine, engines, machinery, and personal effects of and belonging to the said mine, together with all privileges and advantages connected therewith, and I hereby undertake to pay my proportion of all debts and liabilities actually incurred up to and including the current months expenses, as shown by the books of the mine. Witness my hand this (19th day of March, 1884)—Thomas Languid. Witness: Arthur Timid. To the Purser of Wheal Disappointment." This form of relinquishment has been accepted in several instances. It should be sent by registered letter to the purser. It is considered most simple for an executor to get his name registered as a shareholder, and relinquish at once; but in such matters it is always preferable to act under the guidance of a solicitor.

MUNTZ'S METAL COMPANY—"J. L. C." (Brighton).—There can be no question that the new, or rather restored, system of estimating the profits is the correct one. Henceforward you will pay income tax only on real profits, instead of the imaginary profits shown by the professional-accountant-system of balance-sheet. A correspondent of the Times once wrote:—"I had occasion to call in a professional accountant to inspect the books of a concern in which I was interested. He looked a very benign individual, and on my explaining to him that I wanted a balance-sheet, he said in a suave voice:—Quite so and do you wish me to take a sanguine view, or the reverse?" I said, "I don't quite understand; I want to know exactly how I stand." "Oh," he replied, "I didn't know if you wished me to show a profit or a loss; I can, of course, do either. I thought you might want it for publication." He evidently thought I was going to dispose of the concern to the public. The restored system of accounts in Muntz's Metal Company will be returning to the sound old business principle of calling a spade a spade, and calling profits, and nothing else, profits.

Received.—"A. D." (San Francisco): Answered by post—"F. X. S." (Nottingham): Ditto.—"T. L." (Redruth): Already full.—"H. R." (Wheal Benny): Too personal. Put the facts as to what has been done in the lodes, what has been discovered or disproved, and so on, without reference to persons, and they shall be published.—"E. H. G."—"G. T." (Carlisle): The information you seek could be best obtained by applying at the company's offices. If we were to open a discussion upon the purport and intention of a series of agreements such as you mention, it would be interminable.—"A. J. H." (Fulham): We have not further space at disposal.—"B. A."—"R. E."—"J. N."—"A. R."—"R. J. F.": Next week.

THE MINING JOURNAL,

Railway and Commercial Gazette.

LONDON, MARCH 22, 1884.

TECHNICAL EDUCATION, AND INDUSTRIAL PROGRESS.

The time is long past when British manufacturers and industrials could afford to disregard the movements of those of similar avocations in other countries, and rely upon their own greater command of capital and transit facilities to secure their supremacy in the markets of the world. The great principles of Free Trade have not only given England's competitors the benefit of the best machinery England can produce but have placed them in a position to manufacture equally good machines for themselves, and in many cases at a considerably lower price than that at which they could be turned out of our own workshops. In foreign countries moreover, especially in France and Germany, whatever lack of mechanical aptitude may have formerly been observed has been more than compensated for by the careful and judicious training of the workpeople to comprehend the reason for the particular course they adopt, and the precise aim and object of each step of the process or manufacture they are engaged to carry out. So energetic had been the French and Germans, and so neglectful had been the English in the matter of technical education, that a few years since, when the result of this difference became recognised in this country, there were not a few who were ready to deplore our lamentable position and predict that our commercial supremacy was gone for ever. Happily, however, these croakers were in the minority, and the true spirit of Englishmen was manifest in all parts of the country. If others had adopted something, the importance of which we had failed to recognise, surely we were not without a remedy; we must not only repair the omission but develope the idea so as to pass the original, and keep in advance of it. This view has already been acted upon, and the facilities for the acquisition of technical instruction are now at least as great in England as in any other country.

The CITY AND GUILDS OF LONDON INSTITUTE FOR THE ADVANCEMENT OF TECHNICAL EDUCATION meeting on Wednesday was beyond question the most successful yet held; it was well and most influentially attended—the LORD MAYOR, M.P.; Sir SYDNEY WATERLOW, M.P., treasurer of the Institute; Sir FREDERICK ABEL, Chairman of the Council of the Society of Arts; Dr. PARKIN, President of the Chemical Society; and the Masters of the Mercers', Grocers', Goldsmiths', Skinners', Salters', Ironmongers', Vintners', and Clothworkers' Companies, and the Prime Wardens of the Fishmongers' and Dyers' Companies, being among those present—and the report of the Governors on the affairs of the past year was on the highest degree encouraging. In moving its adoption the LORD CHANCELLOR who, as President of the Council of the Institute, occupied the Chair remarked that they had arrived at a critical point in the history of their Institute—a point at which he might congratulate them without any hesitation upon the progress which had hitherto been made, at the same time one at which it became necessary for him to call to mind the importance of proceeding energetically with all great and useful undertakings, and to perceive that they had reached the stage when renewed energy was demanded. It was proposed that there should be four principal professors of chemistry, of engineering, of mechanics and mathematics, and of physics, and other minor teachers in other departments of technology, as well as a proper staff of administrators and assistants, the whole superintended by a Board of Studies, according to the model recently adopted in our Universities, in which the professors would, of course, occupy a prominent position. There would be laboratories properly fitted up, workshops, and drawing offices—all with a view to giving instruction which should combine the elements of those fundamental sciences that underlay the arts and manufactures with as much of a practical character as could conveniently be given to them; and in that respect it was hoped they would be able in some degree to improve upon those models which the experience of the Continent—with which their able director was so well acquainted—had furnished them. With regard to the students, it was proposed that there should be an entrance examination, to render it certain that they had sufficient elementary preparation in science, in mathematics, modern languages, and in drawing. It was proposed that those who were not maintained free as exhibitioners or scholars generally in foundation should pay a fee of 30*l.* yearly, which it was believed would meet the wants of many who were unable on account of their means to send their children for education abroad, or to any other more expensive places. It was hoped that as time went on the number of exhibitions and scholarships which would enable poor, clever, and meritorious students to obtain instruction free in that Institution might increase.

The liberality of the benefactors of the Institute was, of course, recognised and acknowledged; and his lordship then observed that, passing to the cost of the maintenance of the Institution when established, he said that in 1878 it was estimated that out of the income of the Institute 10,000*l.* per annum would probably be needed for the central Institution. At present it was contemplated that 9000*l.* might be found for the purpose, and it was hoped that fees would be available from students, allowing for the gradual progress which must be made before they could attain their maximum number, amounting to 2000*l.* per annum. That gave 11,000*l.* as an expected present income, which would increase when the grant from the funds of the Institute was raised to the originally intended amount of 10,000*l.*, and when the number of students increased, as was hoped, from 150 to 200, the fees from them might then be reckoned at about 5000*l.* Thus there would be 15,000*l.* per annum, the amount estimated as requisite to maintain the central Institution in full working order.

Speaking of the technological examinations, by which the Institute diffused its influence and the power of its superintendence over the whole community throughout the United Kingdom, he said nothing could be more striking and satisfactory than the progress of the work and the testimony of its importance and usefulness which was shown in that department. The candidates who presented themselves for examination during the past year were 2397, being an excess of 425 over the preceding year, and the passes were 1498, or 276 more than the previous year. The candidates came from 154 centres, showing an increase of seven centres. They were examined in 37 subjects. What was still more remarkable was the rapid expansion of the desire to derive the benefits of these examinations, for there were now preparing for the examinations no fewer than 5862 students, being an increase upon the former year of 1814. The influence of the Institute was most strikingly exhibited in these ramifications of its influence.

Referring to the attention which had been paid to the work of the Institute by the Royal Commission on Technical Instruction, his lordship said the Commissioners had visited Finsbury College and other places where the work in which they were engaged could be examined and understood. The Commissioners had examined some of the leading members of the Institute, and he had no doubt that when their report appeared they would receive honourable notice. The grants in aid which the Institute had been accustomed to make to London University and King's Colleges, to the School of Wood Carving, to the Horological Institute, and of late to the Society for the Employment of Women, had been continued, and their operation had proved equally as satisfactory as before. Applications for grants in aid were being continually made from the principal centres of industry in the kingdom, some of which the Council had been able to comply with. Such grants were made to Manchester, Sheffield, Nottingham, and Leicester, and the result had been to draw forth large contributions, which placed the local institutions upon a satisfactory basis. All this work the Institute helped to centralise to give it character and direction. Dealing with the financial position of the Institute, he said the Council had acted within their estimates, and had been faithful stewards of the means entrusted to them.

Having referred to the estimates of future outlay and to the debts which had to be liquidated, his lordship continued that he recognised with great gratitude the liberality with which they had hitherto been supported by the City, and by many of the guilds according to their means; but he could not help thinking that after having achieved such a great and good work, and having more and more reason to be gratified by the results attained, those who had helped them thus far would be able to help them further. He hoped that the City Corporation and the City guilds, as well as individual manufacturers, would be stimulated to give more largely to the institute. Many of them might take a greater interest in some portions of the work than in others, but it would be a vast pity if divergence of views prevented the effectual co-operation and union of all in the general work. The usefulness of every branch of the work depended very much upon the other branches. Nothing could be more excellent than the work which was done in the country, nothing more satisfactory than the effect of their examinations and certificates, nothing better than such work as was done in the centres of practical industry for apprentices and artisans, some of whom would no doubt rise higher and go to the Finsbury College or Central Institution. But all this required as a supplement the highest branch of instruction for the class of students who by natural selection were found to want it most, who would supply the teachers all over the country, and would give a tone, a completeness, and a finish to all local efforts.

The adoption of the report was seconded by the LORD MAYOR, and unanimously adopted. The treasurer, Sir SYDNEY WATERLOW, in acknowledging his re-election, referred to the letter which the PRINCE OF WALES had written to the LORD MAYOR, and in which his Royal Highness said—"While fully aware of the valuable assistance which many of the guilds have recently rendered to the Institution of Technical Education, I shall be much gratified, considering the importance of the Institution's work in relation to the commercial prosperity of the country, if the Corporation and the livery companies of London will further extend their help by placing such funds at the disposal of the Institution as shall enable the Council to successfully continue the efforts they are making for affording technical instruction to persons of all grades engaged in industrial pursuits"—and expressed the hope that the Corporation and the City Guilds would respond generously to the appeal. The professors had been selected, and would be formally located, probably, within a week or a fortnight. It was absolutely necessary to have 21,000*l.* forthwith. The Institute has certainly shown that the amount of good it is capable of doing is enormous, so that too much cannot be said in favour of the appeal for funds being quickly and generously responded to.

EMPLOYMENT IN THE ENGINEERING TRADES.—The general tenour of the last reports sent in from the various districts throughout the country connected with the Engineering Trades' Union Societies is to the effect that the condition of trade, so far as employment is concerned, remains about stationary. The returns issued by the Amalgamated Society of Engineers show an average of about 3½ per cent. of the members in receipt of out-of-work support, which is about the same as shown in the returns of the previous month. In the Manchester and Salford district there has been a slight decrease, the average for the above districts being now about 3 per cent.; the cotton machine making trade has shown a slight improvement, which has resulted in some of the large firms putting on an increased number of men; the large engineering works and tool makers are also kept fairly employed, and locomotive builders are still pretty full of work. Taking however the trade generally of Lancashire, it cannot be said that the reports show any real improvement; but in most cases it is returned as fairly steady, and with the exception of the ship-building branches, this is pretty much the tone of the reports for the country generally. The report issued by the Steam Engine Makers' Society states that the number of unemployed is pretty much the same as last month, but the majority of the branch reports are very despondent in tone as to the condition of trade itself. The reports from the various marine-engine districts were all of a depressed nature, and threatened reductions of wages or the discharge of men seemed to be the general rule; whilst in some districts there was also a tendency to increase the number of working hours. It may be of interest to add that the reports received from the districts in the Colonies and America connected with the above societies are all of a very discouraging character. Trade continues bad, with no sign of improvement, and all branches of industry, especially in the United States, are over-stocked with labour.

WORKING MINERS, AND UNDERGROUND DANGERS.—We last week wrote strongly in condemnation of the enterprise called the Royal National Miners' Life-Saving Institution, because we consider that its existence would be prejudicial to the efficient management of mines, and likely to result in increased loss of life amongst miners. The scheme is still more strongly condemned by the figures contained in the letter of Mr. Theo. Wood Bunning, the secretary of the Northumberland and Durham Coal Trade, in another column of to-day's Journal. Mr. Fenwick asserted that the annual death rate among miners was 1 in every 38 employed, and that there are eight lives lost daily in our mines; whilst, as a matter of fact, in the most calamitous year during the last decade (1878) the death rate was only 1 in every 336 employed, and taking the average of the last 10 years the death rate was but 1 in every 445 employed. The annual death rate for each 10,000 persons employed in the several callings are among miners 22; among railway servants, 37; and among merchant seamen, 114. As Mr. Fenwick pretends that the annual death rate per 10,000 among miners is 263 instead of 22 it is questionable whether he would not lay himself open to the charge of obtaining money by false pretences should he procure contributions to his scheme by the circulation of such misleading figures

BRITISH MINING ENTERPRISE IN MEXICO.

Much as has been said about the great mineral wealth of Chihuahua comparatively little has yet been done to enlist the aid of British capital to develope the resources of the State. During the past five or six years, however, a considerable amount of preliminary and prospecting work has been done with a view to place the holders of mining property in a better position to demonstrate its value in the British market. Amongst those who have been thus engaged is a company incorporated under the English law in 1879, for the purpose of acquiring and working some valuable gold and silver mines at Pinos Altos, which is situated on the western slope of the Sierra Madre Mountains, a region embracing many of the most famous mines of Mexico, and is distant about 250 miles from Chihuahua, on the Mexican Central Railroad, to which place there is direct communication. The mines can also be reached from Guaymas, on the sea coast, or Alamos. The climate is temperate and good. The country is well wooded, pine and oak being abundant for fuel and timber. A stream runs through the property, affording permanent water supply. The old company occupied the property from the date of their incorporation, and their grantors, who had themselves carried out considerable developments, were in possession for several years previously. Titles are officially recorded at Uruachic. Shortly after the company's formation it was decided to send Mr. Lockhardt, an eminent mining engineer from San Francisco, to advise upon the value of the property, and the best means of working it.

The Pinos Altos mines were no exception to the Mexican mines generally—the early workings had been conducted in a very primitive manner; it was, therefore, determined, so soon as the company took possession, to replace the old with improved new machinery, and to develope the property as much as possible. Thus, since operations were commenced in 1879, the shaft of the main (Santo Nino) lode has been continued to a depth of over 700 ft.; a new mill of 45 stamps has been put up; new hoisting works have been erected, and corresponding developments have been carried out throughout. The production of bullion was 49,628*l.* in 1882, and 49,420*l.* during last year, so that an estimate of 50,000*l.* per annum must be acknowledged to be by no means exorbitant. Besides the Santo Nino there are other lodes within the boundary of the company's territory, on all of which important preparatory work has been done, demonstrating the valuable character of the property. These are the Victoria, the Santo Elijio, the Alma de Maria, and the Providencia. Mr. Rickard (of Rickard Brothers) considers the Santo Nino lode one of undoubted permanence, and, if properly equipped and developed, it cannot fail to be highly remunerative. The ore in sight, giving an average assay value of $38·80 per ton, Mr. Rickard estimated at 26,610 tons, but in order to permit a safe valuation to be made he has taken $35 per ton only as a basis for his calculations. At this figure the 26,610 tons of ore would produce $696,512·50. Deduct mint charges, discount, cost of working, &c., $418,508·77; and the actual cash value would be $280,003·73, or about 56,000*l.* sterling. It is mentioned in the prospectus that a considerable increase has been made in the quantity of ore in sight since Mr. Rickard's visit to the mine, and there are also large reserves of lower grade ore exposed, averaging from $10 to $25 per ton, of which no account has been taken in his calculations, but a considerable proportion of which can be profitably worked after the suggested improvements are carried out. Of the whole property, Mr. Rickard says:—"I have no hesitation in saying that the property of the Pinos Altos Company is a very valuable one, and if the foregoing recommendations are vigorously carried into effect, will prove to be very remunerative and permanently so."

In the original purchase, and in the operations which have since been carried on, nearly 200,000*l.* has been expended, a considerable part of which has been borrowed, and further capital being now necessary it has been determined to reconstitute the company—the PINOS ALTOS (MEXICO) MINING COMPANY—with a capital of 250,000*l.*, in shares of 1*l.* each, of which 150,000 are preference shares, and 100,000 are ordinary shares issued as fully-paid, for the purchase of the property. The preference shares are entitled to a cumulative preferential dividend of 10 per cent. until they have received 50 per cent. of their nominal value, when they will become ordinary shares; and they are also entitled to further advantages as to dividends. When the improvements recommended are completed, *i.e.*, in nine months from the present time, Mr. Rickard estimates a profit of 42,426*l.* per annum. This return would be almost three times as much as the total annual interest on the preference shares,

and would permit the payment of a dividend of nearly 17 per cent. upon the whole capital of the company. Some reduction should, however, be made from this estimate to cover administration expenses on this side, though these will, it is anticipated, be more than met by the increased yield to be obtained after the completion of the tunnel referred to in the reports. Out of the proceeds of the present issue of preference shares, after setting aside sufficient for working capital, and for the additional outlay contemplated by Mr. Rickard's report, 110,000*l.* will be devoted to the redemption of the debentures and the payment of the floating debt of the old company. Should the subscription not be sufficient to meet the above 110,000*l.*, the creditors of the old company have agreed to take preference shares for any deficiency, by which means the new company will be started entirely free from debt. The shareholders in the old company have accepted the ordinary shares in full compensation of their personal outlay and interests, and they will also defray the expenses of and incident to the formation of the present company up to the date of the allotment of the shares. The company, of which the present is a reconstitution, consisted almost wholly of the present directors and their friends, so that incoming shareholders will have the advantage of a board well acquainted with the property and its management, the importance of which can scarcely be overestimated.

SCOTCH PIG-IRON WARRANT MARKET.

Mr. W. WILSON (Glasgow, March 20) writes:—The warrant market was firm all last week, but opened flat this morning. A large business is doing from day to day. Trade prospects are still far from bright both in the home and the foreign branches, but this is very much discounted in the exceedingly low figures at which all descriptions of iron now stand. The restriction of production is becoming imperative, and exists already both here and in Cleveland. Shipments are fair for the week, and slightly better than those of last year. One furnace has been lighted at Coltness, while four have been put out at Clyde Works, making the number blowing 94: 104 tons were taken out of store here last week, while 273 tons were taken out at Middlesborough. Business was done during the past week at the following prompt cash prices:—

Thursday, March 13.	Friday, March 14.		Monday, March 17.	
42/3, 42/10 ...	42/10, 42/11½, 42/9½ ...		42/7½, 42/4, 42/7	
Tuesday, March 18.	Wednesday, March 19.		Thursday, March 20.	
42/6¼, 42/7½, 42/6 ...	42/6⅛, 42/7, 42/6 ...		42/5½, 42/5, 42/5¼	
	1884.	1883.	1882.	1881.
Price of Scotch Warrants, March 17	42/6 ...	47/5 ...	49/ ...	48/
Furnaces in blast in Scotland do. ...	94 ...	113 ...	108 ...	120
Iron in store at this date	593,901 ...	587,918 ...	630,285 ...	533,693
Shipments of Scotch pig-iron for week ending March 15	12,238 ...	11,876 ...	17,544 ...	7,893
Do. since beginning of year	105,735 ...	116,980 ...	122,795 ...	98,626
Price of Middlesbro', No. 3, March 17	37/3 ...	40/3 ...	43/3 ...	37/9
Furnaces in blast Middlesbro' dist.	104 ...	119 ...	117 ...	120
Middlesbro' Iron Imported at Grangemouth, week ending March 15	5,335 ...	1,713 ...	6,170 ...	5,115
Do. do. since beginning of year ...	61,880 ...	50,234 ...	68,361 ...	61,141

MINE LORDS, AND ADVENTURERS' OUTLAY.

SIR,—As a shareholder in the Parys Copper Corporation may I be allowed to refer to what appears to me the present unsatisfactory position of its affairs, and also to offer one or two practical suggestions to my brother shareholders? I gather from the report of the last meeting, published in the *Mining Journal* of March 1, that 90,000*l.* has been spent upon the mines of the company, that ores and products to the value of 79,391*l.* 12*s.* 8*d.* has been sold, and that 5000*l.* have been paid as rent or royalty to the lords for land which for any other purpose than mining would have been valueless. For some years, the report goes on to say, a considerable sum of money was spent in the experiment of driving a level, or small tunnel, 30 fms. below the great opencast, which had yielded a profit of 5,000,000*l.* to the lords in former years. During the progress of this work, which was watched with the greatest interest by the shareholders and by the mining world generally, it would seem that 30,000*l.* were spent, and had the result been as generally anticipated it would have been a grand thing for the lords as well as for the shareholders; and the latter seem at least to deserve some consideration, if not thanks, for the way they spent such a large sum of money in the experiment. The report goes on to say that at about this time copper ore dropped more than 2*l.* per ton; thus it was impossible to raise and sell the poorer class of ores except at a heavy loss. Operations, therefore, had to be curtailed in the working, and in the search for these profitless ores. And how did the lords then act? They issued writs against the company for breaches of covenants of the leases, and claimed 5000*l.* as damages! Negociations were then entered into between the Parys directors and the directors of the Mona Mining and Smelting Company (the latter already owning half the great opencast), and having large smelting-works besides, to amalgamate the mines and form a united company. I gather that these negociations have been going on for some six months, and that the only thing which has interfered with the arrangement has been and is the suit of the lords, and that during the six months that it has been carried on the Parys directors have been compelled to keep on the works at a loss of 200*l.* a month, and the legal costs have been run up to a large sum.

The manager of Mona, a gentleman described as one of the highest standing in Anglesey, has estimated, as I hear, to the satisfaction of the directors of both companies that on the amalgamation of the two mines a profit of from 9000*l.* to 10,000*l.* a year could be made by manufacturing, smelting, and utilising the various products of both mines. The advantage of the amalgamation to the lords is, therefore, apparent, and the shareholders in both mines would receive material benefit also.

These, as far as I can gather, are the main facts of the case, and I fear that they will seem almost as incredible to some people as they have seemed to me; and I would now suggest that they be laid plainly and briefly before the lords themselves, either in a statement from the directors or a deputation from the general body of shareholders. It is further said, in the report to which I refer, that the lords of mines in Cornwall and elsewhere are assisting their lessees both in reduction of royalties and in remissions of arrears; and it is difficult to conceive that such persons as Lord Sydney, the Marquis of Anglesey, or Lady Neave can hardly be aware of the hardship, to say nothing of the costs, thus inflicted upon the Parys Company. I am given to understand that upwards of 10,000*l.* were paid as valuation for machinery, &c., on the Parys Mines, which under the action thus held over the shareholders' heads might be jeopardised or lost.

London, March 17. S. M. A.

SPARE CASH: WHAT SHALL I DO WITH IT?—Mr. ALFRED THOMAS of Coleman-street, has just prepared a fresh and entirely re-written edition of his invaluable work, "Spare Cash: What shall I do with it?" Whilst offering to his readers many shrewd observations with reference to general investments, he has been particularly happy in describing the present condition of the mining industries at home and abroad. No one at all acquainted with mining can fail to be struck with the accuracy of his knowledge on this point and the general correctness of the details he sets forth. His remarks upon the management of foreign mines are based upon experience. He sings what he terms "the dirge of the Indian gold mines," and as regards the mines on the Gold Coast and the diamond companies he has a very poor opinion. More encouraging, however, are his remarks upon gold mining in the Transvaal, of which he has evidently formed a good opinion. He offers to guide those investors who may wish to consult him, and he points to his 20 years' experience as well qualifying him to do so. A perusal of his work will, however, convince most people that Mr. Thomas is qualified to give sound advice to those wishing to dispose of their surplus capital. "Spare Cash" is, however, recommended for perusal to a much wider constituency than that of the investing public, for it is full of information conveyed in a pleasant and agreeable form which, it is hoped, will captivate the reader and instruct him on matters upon which the public often display a lamentable degree of ignorance.

THE APATITE DEPOSITS OF CANADA—No. I.

BY T. STERRY HUNT, LL.D., F.R.S., MONTREAL, CANADA.

The presence of apatite in the Laurentian rocks of North America has long been known to mineralogists, and within a few years so much interest has been excited by the economic importance of deposits of this mineral found in certain parts of Canada, that a brief history of our knowledge of these deposits may not be unacceptable to the members (the paper was read at Cincinnati meeting, February 1884) of the American Institute of Mining Engineers. It was in 1847 that the present writer was shown by a local collector of minerals some large crystals, which had been called beryl, found in North Burgess, in Ontario. These were at once recognised as apatite, and after a visit to the locality, this was described in the report of the Geological Survey of Canada for that year as likely to furnish an abundant supply of a valuable fertiliser; the opinion being then expressed that the fact of "the existence of such deposits as these will prove of great importance."

Specimens of apatite from this locality collected by the writer were shown among the economic minerals of Canada at the Great Exhibitions of London and Paris in 1851 and 1855, and the mineral had already been found by explorers at several other points in the same region previous to 1863. In the Geology of Canada, published in that year, the writer resumed the results of his further studies of these deposits, and describes the apatite as occurring in the Laurentian rocks, both distributed in crystals through carbonate of lime, and in irregular beds running with the stratification, and composed of nearly pure crystalline phosphate of lime." This was further said to occur in North Burgess, in several parallel "beds interstratified with the gneiss."

In a subsequent report of the Geological Survey in 1866 I again noticed the occurrence of the apatite in beds in the pyroxenic rocks often found associated with the gneiss. It was said, "the presence of apatite seemed characteristic of the interstratified pyroxenic rocks of this section, in which it was very frequently found in small grains and masses, alike in the granular and the micaceous schistose varieties." In these rocks the apatite was said to mark the stratification, and to form, in one example, a bed, in some parts 2 ft. thick, which was traced 250 ft. along the strike of the pyroxenic rock. I at the same time described the occurrence of apatite, often with calcite, in "true vein-stones, cutting the bedded rocks of the country," alike gneiss, pyroxenite, and crystalline limestone. These latter deposits were farther spoken of as well-defined veins, traversing vertically, and nearly at right angles, the various rocks; as often banded in structure, and including besides apatite both calcite and mica occasionally with pyroxene, and more rarely with hornblende, wollastonite, zircon, quartz, and orthoclase. These veins were said to be very irregular, often changing rapidly in their course from a width of several feet to narrow fissures. It was added, "it is evident that this district can be made to supply considerable quantities of apatite;" and while the uncertainties arising from the irregularities of the veins were mentioned, it was said that "some of the deposits might probably be mined with profit."

Before following further this history it may be stated that there are two districts in Canada which have, within the past few years, been found to contain deposits of apatite of economic importance; one in the province of Ontario, in which the above observations were made by the writer previous to 1866, including parts of the counties of Lanark, Leeds, and Frontenac; and the other, since made known, in the provice of Quebec, chiefly in Ottawa County. In both cases it is found in the rocks of the Laurentian series, consisting of granitoid gneisses, with bands of quartzite, of pyroxenite, and of crystalline limestone. These ancient and highly inclined strata, with a north-east strike, rise from beneath the horizontal palæozoic rocks near Kingston, and again pass beneath them near Perth. These overlying strata, belonging to the Ottawa basin, hide moreover to the eastward, the apatite-bearing gneisses of this district, which a short distance to the westward are again concealed by the Taconian and other overlying pre-Cambrian groups in Hastings County. The gneissic belt is here seen chiefly in the townships of Loughborough, Storrington, Bedford, North and South Crosby, and in North Burgess, where the apatite was first discovered.

The country presents a succession of small, isolated, rounded, rocky hills, alternating with numerous small lake-basins, hollowed out of the gneiss, and sometimes out of the interstratified limestones, the general trend both of the hills and the lakes being coincident with the strike of of the rocks. These, though concealed in the valleys by considerable depths of alluvial soil, are seen in the hills to be hard and undecayed. These geographical features, as I have elsewhere pointed out, were apparently determined by sub-aërial decay previous to the erosion which removed from them the softened and disintegrated portions, leaving the present outlines.

When, after cutting the forest growth which covers these hills of granitoid gneiss, fire is allowed to pass over the surface, destroying the undergrowth, the comparatively thin layer of soil is laid bare, and is soon washed away by the rains, leaving the bald, rocky strata exposed in a manner singularly favourable for geological study, but rendering the region sterile. To prevent this process of denudation it has become the practice in some parts of the country, after burning over the hill sides, to sow them, without loss of time, with grass seed, which, at once taking root, protects the soil from the destructive action of rains, and transforms it into good pasture land. This system, which has been adopted to a considerable extent in parts of Frontenac County, Ontario, is worthy of record and of imitation in other regions.

The similar apatite-bearing gneisses, which are found to the north of the River Ottawa, a little north-east of the city of that name, are in Ottawa County, Quebec, and chiefly in the townships of Buckingham, Templeton, and Portland. They reproduce all the characteristics of the first-mentioned district, and may be looked upon as a prolongation of it, beneath the north-western limb of the palæozoic basin already mentioned. Later observations, both in Ontario and in this latter district, where mining operations have been carried on within the past few years, have been recorded by Messrs. Broome and Vennor, and by Dr. Harrington—the latter up to 1878. They have, however, added little to our knowledge of the conditions of occurrence of the mineral beyond what had already been set forth in 1863 and 1866.

I have, within the past few months, examined with some detail many of the apatite workings in Ontario, which have served to confirm the early observations, and to give additional importance to the fact, already insisted upon in previous descriptions, that the deposits of apatite are in part bedded or interstratified in the pyroxenic rock of the region, and in part are true veins of posterior origin. The gneissic rocks, with their interstratified quartzose and pyroxenic layers, and an included band of crystalline limestone, have a general north-east and south-west strike, and are much folded, exhibiting pretty symmetrical anticlinals and synclinals, in which the strata are seen to dip at various angles, sometimes as low as 25° or 30°, but more often approaching the vertical. The bedded deposits of apatite, which are found running and dipping with these, I am disposed to look upon as true beds, deposited at the same time with the enclosing rocks. The veins, on the contrary, cut across all these strata, and, in some noticeable instances, include broken angular masses of the enclosing rocks. They are, for the most part, nearly at right angles to the strike of the strata, and generally vertical, though to both of these conditions there are exceptions. One vein, which had yielded many hundred tons of apatite, I found to intersect, in a nearly horizontal attitude, vertical strata of gneiss; and in rare cases, what appear, from their structure and composition, to be veins, are found coinciding in dip and in strike with the enclosing strata.

The distinction between the beds and the veins of apatite is one of considerable practical importance—first, as related to the quality of the mineral contained; and second, as to the continuity of the deposits. The apatite of the interbedded deposits is generally compactly crystalline, and free from admixtures, although in some cases, including pyrites, and more rarely magnetic iron ore, with which it may form interstratified layers. Many will recall in this connection the bands of magnetite, with an admixture of granular apatite, found interstratified in parts of the great magnetic ore deposit known as the Port Henry Mine, near Lake Champlain, where, in certain layers formerly mined, the apatite made up about one-half the bulk. I have seen an example of a similar association of magnetite and apatite from Frontenac County, Ontario. The latter mineral is, however, for the most part found included in the beds of pyroxene rock, already mentioned, which is generally pale green or greyish-green in colour, sometimes containing quartz and orthoclase, and distinctly gnessoid in structure.

The veins present more complex conditions, while they are often filled throughout their width by apatite as pure and as massive as that found in the beds, it happens not unfrequently that portions of such veins consist of coarsely crystalline, sparry calcite, generally reddish in tint, holding more or less apatite in large or small crystals, generally with rounded angles, and often accompanied by crystals of mica, and sometimes of pyroxene and other minerals. Occasionally these mixtures, in which the carbonate of lime generally predominates, will occupy the whole breadth of the vein. These lime-veins, as they are called by the miners, sometimes include cavities from which the carbonate appears to have been dissolved by infiltrating waters, leaving free the inclosed crystals of apatite. In some cases, however, these veins present cavities which have apparently never been filled with solid matter, and exhibit drusy surfaces, with quartz, and more rarely with barytine and zeolites. These calcareous veins often carry so much carbonate of lime as to be valueless for commercial purposes, unless some cheap means for separating the apatite can be devised. It may be said, in general terms, that while some of these true veins throughout portions or the whole of their breadth, yield good and pure apatite others are of comparatively little value. The bedded masses, on the contrary, are free from carbonate of lime, and although they may occasionally contain small quantities of mica, pyroxene, hornblende, or pyrites, these are seldom present to an injurious effect.

The question of the continuity of these deposits of both classes is an important one. Veins filling fissures that have been formed in rocks are sometimes continuous for great lengths and to great depths, but experience shows that their extent varies very much for different regions and for different rocks. Inclined beds, which were once horizontal sheets, inclosed in strata that have since been folded, should be as persistent in depth as they are in length; and when traced in the outcrop for many hundreds of feet may be expected under ordinary circumstances to continue downwards as far, unless a turn of the inclosing strata brings them up again to the surface. The inclosed beds of apatite in the regions already noticed are often traced for 500 to 1000 ft. and more, and there is reason to believe that they are continuous for long distances. The workings upon them have, however, as yet been very superficial, generally from 20 to 40 ft., and rarely exceeding 100 ft. The deepest mine, which is in Ottawa County, is now about 200 ft.

The ordinary thickness of the bedded masses of apatite may be said to vary from 1 to 3 and 4 ft., though not unfrequently expanding to 8 and 10 ft., and even more, and sometimes contracting to a few inches; the same layer being subject to considerable variations. In some cases the apatite in a bed is found to thicken and then to diminish, or to be divided by the interposition of the accompanying pyroxenic rock. The condition of the apatite in these cases recalls the thickening and thinning sometimes observed in a layer of coal among disturbed strata, where, as the result of great pressure attending the movements of the harder inclosing rocks, it is alternately attenuated and swollen in volume; in which case a thinning in one part is necessarily compensated for by a thickening of the parts adjacent.

The thickness of the veins also, as above stated, is very variable, and the same vein in a distance of a few hundred feet will sometimes diminish from 8 to 10 ft. to a few inches. We have already noticed the variable nature of the contents of these veins, which are sometimes filled with solid and pure apatite, and at other times present bands or layers of this mineral, with others chiefly of calcite, of pyroxene crystals, or of a magnesian mica, occasionally mined for commercial purposes. While these veins have yielded in many cases considerable amounts of apatite, they have not the persistency of the beds. Their study presents many interesting facts in paragenesis, which I have described in detail in the report of the Geological Survey for 1866.

PRINCIPLES AND PRACTICE OF ELECTRIC LIGHTING.

Although the mania for electric illumination is less prevalent now than it was a few years since there is still an enormous number of persons who feel an interest in electric lighting, and look forward to electricity supplying the popular light of the future. Hitherto as regards economy success has been very exceptional, but as there are decided indications of progress in some of the inventions and discoveries which have been brought forward during the last five or six years the attainment of commercial success is not so entirely hopeless as the opponents of electric lighting would have it supposed. The natural law which controls the radiation of light is of course adverse to the substitution of an electric arc lamp of 1000-candle power for 50 gas or other lights of 20-candle power each, provided diffused or distributed light be required, but where 8000 or 10,000-candle power is required in a single hall or room electricity can be utilised to supply a fairly cheap illuminant. But this observation applies with equal force to all lamps of great power, whether they take the form of an arc lamp, of a lime, or a zircon light, or any other, whence all efforts should be concentrated upon rendering the electric light cheaper than all others for illuminating large buildings. The other difficulty connected with electric illumination is much more serious, since (as it is acknowledged that in electric lighting, whether by arc or incandescent lamp, we obtain the illuminating power by a very indirect process) it involves the question whether by the consumption of a given number of tons of coal as much light—that is to say, as many candle-power can be obtained by electricity as by extracting the gas from the coal and consuming it as gas. Thus far all experience is this direction has been very decidedly in favour of gas. Generally, indeed, the current to furnish the illuminant has been produced from a dynamo driven by a gas-engine, and it has never been even asserted that a higher candle-power is obtained from a given quantity of gas when the said gas is used indirectly in the form of electric lights. To judge from even the best electric lamps yet seen it will be some time before such an assertion can be truly made.

Admitting, however, that progress has been made in electric lighting invention it may be assumed that the attainment of perfection will be more speedy in proportion to the number of workers seeking to attain it, and since successful invention can only result from a thorough comprehension of the principles involved, such works as that of Mr. Alan Swinton—The Principles and Practice of Electric Lighting. By ALAN A. CAMPBELL SWINTON. London: Longmans, Green, and Co.—may fairly be commended as worthy of attentive study. The volume seems to be especially written for those who desire to possess a sound acquaintance of the whole subject of electric lighting without the previous systematic study of mathematics and physics, there being no formulæ, and very few technical words—none but those which are absolutely necessary to the complete elucidation of the matters to be explained. A brief introductory chapter is followed by others on the theory of electric lighting; on electrical, mechanical, and photometrical measurements; on sources of power; on arc lamps; on semi-incandescent and incandescent lamps; on electric accumulators; on electric lighting systems; and on the advantages and cost of the electric light in its various applications.

In the chapter on comparative cost the advantage is, of course, shown to be in favour of electricity, but it must not be forgotten that the figures given are estimates only as regards electricity against ascertained facts with regard to gas illumination. Mr. Swinton is no doubt correct in saying that it is "very probable that in every case the figures given are rather too advantageous to electricity," but it is far from being beyond doubt that "especially in large installations lighting with electric incandescent lamps is more economical than when gas is employed." At present the life of an incandescent lamp is very uncertain and, to take one estimate only, it is exceedingly improbable that a plant consisting of engines, boilers, and dynamos, costing 140,000*l.*, and 37,000*l.* worth of conducting mains, maintaining 64,000 lamps could be kept going by men receiv

ing 6000*l.* per annum amongst them, and having out of that amount to pay for all necessary repairs and sundries, Again, it has yet to be proved that taking 64,000 lamps the average life of each is 1200 hours, each lamp being lighted and extinguished 200 times. These however, are questions which can only be settled by actual experience. As a whole Mr. Swinton's volume is interesting and instructive; it contains a vast amount of information and in all particulars connected with the scientific aad mechanical branch of the subject of electric lighting is thoroughly reliable

MODERN PROGRESS IN MINE ENGINEERING—No. IV.

BY H. BRAMALL, M. INST. C. E.*

In the design and construction of head-frames for carrying the winding pulleys a better appreciation of the principles of framing in carpentry is shown than was formerly the case, and for very deep pits iron has been substituted for timber, either in lattice column, plate web girder, rolled girder, box girder, or tubular girder form. The Legislature requires that the tops of all shafts when not in use shall be fenced, but at all well-regulated collieries shafts while in use are protected by movable fences, a provision which presents no difficulty, and which has undoubtedly saved many lives. Similar means ought to be taken to protect all openings into shafts in metalliferous mines.

The necessity before alluded to, of getting the largest possible daily output of material from some of the very costly modern deep shafts, has led to the invention of several schemes for lessening the delay in changing the tubs in the cages. In one plan stages are fixed to correspond with the floors of the cages, in another there are subsidiary cages worked by hydraulic rams, and in yet another the rails in the cages on which the tubs rest are tilted as the cage settles on the catches so as to cause the tubs to run out of the cage, while by similar elevation of rail, by a small hydraulic ram, the empty tubs run in and take their place. The difficulties of conveying prompt and distinct signals in very deep shafts have been overcome by the application of electric bells with the best results, and where inclines are worked by engines placed upon the surface the benefits afforded by this system are very manifest, while the telephone, which has been introduced in several mines, affords an invaluable means of communicating with the surface by audible messages, to the great saving of time and economy of winding power.

The common means of ingress and egress of the miners in metalliferous mines is by ladders, entailing a severe and exhaustive tax upon the energies of the men. To remedy this evil a machine known as the man-engine, consisting of a reciprocating rod to which platforms are attached, and on and off which the men step in their progress to or from the surface. This has been entensively applied in Germany, in some instances on a very large scale, as at Przibram where is one 800 yards deep intended to be extended to 1000 yards, and another at Clausthal 712 yards, while several have been introduced into Cornwall. In collieries the custom is to wind the men in the cages used for winding coal, and where downright shafts are available, as in America, this method is also applied in other mines, it being incomparably the best and safest method. The Prussian reports for 1881 give the number of deaths per 1000 as:—

Where cages and ropes are used	·081
Where ladders are used	·084
Where man-engines are used	·383

These returns seem to be conclusive as to the esteem in which these clumsy and dangerous machines ought to be held.

The pneumatic system of raising a load, patented in England in 1845†, has been practically applied at Epinac Colliery, Saône et Loire, on a large scale for hoisting coals from a depth of 656 yards, which it is intended to further extend to a depth of 1093 yards. An air-tight wrought-iron tube, 5 ft. 3 in. diameter, is placed in the shaft and fitted with a piston cage carrying nine tubs, and the air being exhausted above the piston a load of 3 tons of coal is raised thereby at a rate of about 19½ in. per second.

Having to deal with a heavy, bulky commodity of low value, which often has to be transported considerable distances under difficult or disadvantageous conditions, the question of improved means of conveyance has necessarily occupied a large share of the attention of colliery engineers, and its importance is now very generally recognised. To secure the maximum efficiency roads underground should be laid out so as to have as easy gradients, and be as straight and free from abrupt turns, as is possible. Rails of sufficient rigidity, with broad bearing surface and round tops, should be adopted, and the sleepers should be put in at regular intervals of (say) 3 ft., and well packed. The axles of the tubs should be kept well lubricated, and the wheels should be as large in diameter as circumstances will permit. The ratio of dead to live weight should be diminished as far as possible, to which end steel wheels, besides possessing very remarkable durability, will be found to materially contribute. That there is room for improvement will be admitted when we remember that the tractional resistance on railways is not more than 8 lbs. per ton, and on street tramways 22½ lbs., while in colliery underground roads and trams it is rarely less than 35, and often reaches 50 and even 60 lbs., surely at least double what it need be.

The transmission of power for underground purposes is scarcely of recent date, and there are few collieries where it is not availed of in some form. In the earliest methods haulage was adopted for inclines by engines fixed either on the surface or underground, the boilers also being sometimes placed below. Steam can be conveyed from the surface in well-clothed pipes for 300 to 400 yards without any serious loss; but the difficulties of disposing of the waste steam, and the risk and dangers attending the placing of boilers underground, have limited the use of such plants to situations near the pits. Hydraulic power has been applied in certain special cases, chiefly for pumping, and in a few cases to drive hauling engines; but this can only be available where there are facilities for disposing of the waste water. Recently power has been transmitted underground by endless ropes and clip pulleys; but this method is of only limited application. The successful utilisation of compressed air at the Mont Cenis Tunnel showed mining engineers how efficient an auxiliary it might be, and gave an enormous impetus to the application of machinery underground. True it is not the most economical method of transmitting power; but it is a convenient one. By it power is easily conveyed with very small loss in transit to the most remote portions of a mine, where it may be useful either for hauling or pumping, or for boring or coal cutting. There is no risk of fire or damage to roads by heat or waste steam or water, no need for any provision to carry it away when spent, as the very refuse air having done its work becomes a valuable agent in cooling and ventilating the working place, and even leakage from the conveying pipes should not be considered as all loss since it serves the same useful purpose. The loss due to the heat generated in the compressors has been considerably reduced by M. Cornet's method of injecting water spray, which takes up this heat and also saves loss by leakage and clearance, and a useful effect in the air of 80 to 85 per cent. is thus obtained. The useful effect got out of the air driven engine may be taken in practice as about 30 to 35 per cent. of the prime motor, although with the best arrangements an efficiency of 50 per cent. has been recorded. Seeing how great a share of attention electricity has of late attracted to itself, it is not surprising that its use as a transmittor of power to the interior of mines has been attempted. At the Perronière Mines it is used to convey power from the surface, a distance of about 1300 yards, and is there driving a hauling machine, the useful effect obtained being from 12 to a maximum of 26 per cent. At Zankerode it is used for haulage by Siemens' electro locomotive, and there and at Blanzy to transmit power to small interior ventilating fans. In England, at Trafalgar Colliery, it is employed to drive a small pump in the workings. The difficulty and uncertainty of maintaining perfect insulation, and the liability to sparks when this fails and when contact is broken, render it unadvisable to introduce such an element of danger into fiery mines, and the small amount of power capable of being thus transmitted, and the low percentage of useful effect obtained, are such as must greatly tend to limit its application to peculiar and special conditions.

The application of power to underground haulage has been greatly extended of late years, the systems which have been found most convenient and economical being the endless rope or chain and the tail rope. But these systems entail the establishment of fixed engines and long ropes, with liability to derangement at angles and bends in the roads and some complication at branches. The greater simplicity of haulage by locomotives has induced trials of them, and at Laxey, at Doman in Hungaria, and in America, those of ordinary type have been introduced in adit levels with considerable economy; but they are objectionable from the smoke and steam given off, and of course could not possibly be admitted into any mine liable to give off explosive gases. Locomotives driven by compressed air carried in a reservoir were used in the St. Gothard Tunnel, and since then in several places, and this plan is adopted in the Mékarski and Scott-Moncrieff trams; and in the locomotive designed by Lishman and Young specially for mining purposes, and now in use at the Earl of Durham's and Cannock and Rugeley Collieries. Col. Beaumont has constructed a locomotive in which he employs very high pressure (1000 lbs. per inch), and the air *is* expanded in two cylinders; but as it requires the use of a stove it is unfitted in its present form for mine use. None of these systems have yet been long enough working to justify an opinion as to whether they offer notable advantages over those with fixed engines.

In the Royal Colliery, Zankerode, an electrical locomotive on the Siemens' system is engaged in drawing coal tubs along a level 678 yards to the shaft, which is about 240 yards deep. The train consists of 15 tubs of about 1595 lbs. gross weight each, and is drawn out in 4½ minutes, the useful effect being from 21·5 to 30 per cent. of the prime motor on the surface. The cost is a little less than by horses; but the sparks given off on breaking contact with the conductors are an element of danger that could not be tolerated in any fiery mine. The comparative efficiency of the various systems may be approximately stated as follows:—

Endless rope	Power utilised	77 to 92	per cent.
„ chain		75	„
Tail rope		55	„
Compressed air		30 „ 50	„
Hydraulic		25 „ 30	„
Siemens' electric locomotive		20 „ 30	„
Beaumont's compressed air		20	„
Electric hauling up incline		12 to 26	„

* President's Annual Address to Liverpool Engineering Society.

† An English patent was granted in 1844 for a system of raising a load by vertical tubes similar to those of the atmospheric railway.

COAL IN INDIA—THE SINGARENI COAL FIELD.—No. I.

BY WILLIAM KING, B.A., D.SC.,

Deputy-Superintendent Geological Survey of India.*

Hidden far away in a little-frequented part of the Nizam's dominions, and very small, it is yet the only field certainly known to contain seams of coal of importance within reach of the Madras Presidency. There are only two areas of coal-bearing rocks in this Presidency. One at Beddadanol, in the Godavari District, but after being bored the results were so poor that discontinuance of the explorations was reluctantly decided upon; besides, any further examination could only have been carried on in ground where the placing of sites for bore-holes would have depended very much on what was little better than guess work, as to the probability of their striking any coal even at great depths. The second field is near Bhadrachellum, on the British side of the Godavari; its area is unfortunately very limited, and there appear to be only 25,000 tons of coal, of which little more than one-half can be properly worked. There are, however, other areas not far from these, which, though small as compared with the coal fields of the Central Provinces, are of sufficient extent and capability to make them of exceeding interest to Madras. It is true they are in what is at present a very out-of-the-way region, and they are infinitely small in the vast area of Southern India. Still the opening up of the country will come in time, and the amount of coal in a field is not always proportionate with the extent of that field superficially. The demand for coal is now so urgent and far reaching that very extraordinary efforts must be made to win it, and the resources of Singareni and the other fields to be mentioned are likely to repay such extraordinary efforts—in fact, that it may be possible for very many years to come to lay the coal down at Madras so cheaply that it will compete very favourably with the fuel now obtained from Great Britain or Australia.

In describing the geology of India it has been found convenient to call the country lying to the south of the great alluvial flats of the Ganges and Indus, or the Indo-Gangetic Plain, Peninsular India; while all the country to the north is considered Extra-Peninsular India. The present argument is confined, therefore, to certain rocks or formations of Peninsular India. A very remarkable and extensive series of sandstone and other rocks, characterised by the fossil remains of plants, and hence often called the plant-bearing series, is developed in the central and north-eastern part of this country, and it stretches down towards the Madras Presidency from the Central Provinces, by the Pranhita and Godavari rivers. This great series contains a sub-division of coal-bearing rocks, but these are not of the same age as the coal-bearing rocks or coal measures of Europe. We do not know of, nor do I think there are, any rocks of carboniferous age in Peninsular India. To put it proudly, this wonderful series of plant-bearing sandstones is a speciality of India; it is also met with in South Africa and in Australia, but it is best developed in India, and has been best worked out through the sure labours of Mr. W. T. Blanford, Dr. Feistmantel, and others among his colleagues. It is in fact an Indian rock system, standing on its own lithological, stratigraphical, and palæontological merits, confined within no limits of European or American classification, but demanding a place for itself in the great geological history, and worthy of its classic name—the Gondwana System.

A very marked member of this system, or rather of the lower part of it, is the Damuda formation, containing the Indian coal measures. Such terms, however, as coal measures and coal-bearing rocks are apt to mislead, if only in the matter of there being a difference of age between such rocks in Great Britain and in India. Hence when they are spoken of here it is safer and better to call them Barakar sandstones or the Barakar group or sub-division of the Damudas; and thus the terms stand not merely for rocks named after the Barakar river, but for a group of rocks in which the coal proper of India is known to occur.

When a geologist finds himself on lower Gondwanas he is on the alert for Damuda strata, but if he feels—as I did when walking over the Singareni country—his foot drag over the peculiarly rough surface of Barakar sandstone, then no Indian trapper can beat him at taking up a trail which shall lead in all probability to coal. Although it has just been stated that the Gondwana system requires a place of its own in the geological history, and that its Damuda formation is of a different age to the carboniferous formation of Europe, they can be placed approximately alongside the European order of classification thus:—

European Classification.		Indian Classification.		
MESOZOIC.	JURASSIC	MAHADEVA, RAJMAHAL	Upper	GONDWANA.
	TRIASSIC	PANCHET		
		Rániganj, Kamthi, Barákar — DAMUDA	Lower	
PALÆOZOIC.	PERMIAN	TALCHIR		
	CARBONIFEROUS	Coal measures, Mountain Limestone.		

Concerning the groups of the Damudas it is only necessary to state that the Kamthis do not contain coal, or are not known to have any seams worth consideration. The Barakars are coal bearing *par excellence*. The Talchir formation need only be referred to here, because it occurs at Singareni associated with the Damudas. The term is here used for the fuel properly so called, which every European ought to be able to recognise at once; though, indeed, absence from home and not having seen or handled it for years, or carelessness about noticing a stone which is as typical of England as anything else, have made some men so blind that they have mistaken the hard and glassy black mineral tourmaline for coal, or blackness of colour generally, as the one main attribute of an otherwise easily recognisable rock. Other substances such as lignite, like that occurring on the Travancore Coast, or the compressed and partially or wholly carbonised vegetable matter of the alluvial deposits of Pondicherry and Cuddalore, however useful they may turn out as fuels hereafter, are not to be thought of as coal.

There is no doubt about the "stuff" (as some people have called it) of Singareni being coal. Several tons of it were brought down to Madras in the Duke of Buckingham's time, when it was tried on the Madras Railway by Mr. Trevethick, who reported it as coal without a question as to whether it was anything else. The only doubt was as to its being good enough for the work required from coal or other fuel on the railway; and the locomotive superintendent decided that it was so fitted if it could be landed at the railway at a sufficiently cheap rate.

The coal fields now under consideration are situated near the south-eastern limits of the area of lower Gondwana rocks—that is, on the lower part of the Godavari Valley or close to it, Singareni being the only one not absolutely within the drainage area of this river. They are Tatpali on the left bank, or British side, of the Godavari; Singareni, Sivawarum, and Madaverum on the Nizam's side; and Beddadanol in the Godavari district. There are others such as Lingala, Kamarum, Bandalla, and Kinarsani or Alapali, but these are not of immediate interest. If one of the more important of these fields be only opened up, and an easy and cheap route be made for getting the coal carried away, the rest can be utilised in turn. Singareni, though it be of small size, is the most important field, on account of its having been best explored, and because its coal is known to be good in quantity and quality. On the other hand Sivawarum, Madaverum, and Beddadanol are parts of a connected area, in which there may be large extensions of Barakar strata. There are fair indications of good seams at Sivawarum, but so far Beddadanol has failed to show anything better than poor coaly shales.

The Singareni field is situated about 17° 35′ N. lat. and 80° E. long., in the eastern part of the Kundikonda taluq of the Nizam's dominions. It is about 130 miles from Hyderabad, 50 miles from Hanimkonda (through which town it is proposed to run the Hyderabad-Chanda Railway), 40 miles from the nearest point on the Godavari, opposite Bhadrachellum, and between 80 and 88 miles from Bezwada, whence there is a canal way to Madras. Kummamet, the nearest large town, lies about 24 miles to the south. The country is very poorly populated, with few small villages, in the midst of jungle; but fortunately for railway purposes in the plains, and not hidden away among hills as is the case with some of the other fields. It was even difficult to give this field a name, but it is called after a once large village, which though not actually on coal rocks is not far from them. There are about 19 square miles occupied by the Gondwanas, only 8 miles of which can be considered as Barakars, a considerable portion of them being covered up or overlaid by Kamthis. When I first found this field all that was evident to me was that it was one of Barakar sandstones. I soon found that they are associated not only with their overlying group the Kamthis, but that the Talchir formation underlies them. Such an association of the lower Gondwanas was eminently satisfactory, as showing that this field was not a mere dying-out patch of a single group; and, therefore, my hopefulness of finding coal was considerable. My search was eventually rewarded by finding a solitary outcrop of coal in a pot-hole in the bed of the main stream, the waters of which happened to be unusually low at the time. Having thus ascertained the existence of coal, I completed the survey of the field, and pointed out where trial borings should be made.

* Abstract of lecture delivered at the Government Museum, Madras.

CONTINUING BANKRUPT BUSINESSES.—Shareholders and creditors have, in turn, complained of the hardship and loss inflicted upon them by liquidators being permitted to carry on an insolvent business, in the hope of finding a purchaser. A case of this kind came before Mr. Justice Chitty, in the Chancery Division, on March 15. It was the petition of three executors of certain freehold lands, mines, and minerals held by the company for the winding-up of the company. The petitioners were debenture holders There was an application made a few weeks ago, asking for the appointment of a provisional liquidator to carry on the works and pay the wages, which amounted to about 2000*l.* a week. Some of the creditors had put in a distress, and had been served with a notice of motion; but it was explained that this had been done by mistake, and that it was not the intention of the liquidator to proceed with it, and the costs of the parties would be paid. There were certain debenture holders who had expressed their willingness to allow the petition to stand over to the first petition day in the next sittings, on the understanding that the provisional liquidation would be continued. The property was a very valuable one, and it would be a serious matter were the works to be stopped. An application had been made in Chambers, and authority had been given for the provisional liquidator to raise the assets necessary to pay the weekly wages. Creditors unsecured to the extent of 8000*l.* appeared, and asked that the winding-up order should not be now made, but the petition might stand over as asked. His lordship said that to allow a provisional liquidator to carry on a business was often a serious matter for the creditors. One of the counsel for the petition said that it is true that the wages are about 2000*l.* a week; but the provisional liquidator will not require to raise that amount, for moneys are continually coming in. His lordship agreed to continue the powers to the provisional liquidator to raise moneys for the payment of wages, and directed the petition to stand over as asked.

SAFETY-LAMP COMPETITION.—Referring to the Ellis-Lever premium sometime since offered through the *Mining Journal*, Mr. George Howell refers to the insecurity and other defects of the Davy lamp, and says:—It was a knowledge of these facts that led Mr. Ellis-Lever to offer a premium of 500*l.* for a perfect safety-lamp—one that will not explode and which will, at the same time, afford ample light to the miner. The premium has since been increased by the addition of 100*l.*, given by the Miners' National Union. It is hoped by many that the lamp competition will produce one at least really good and trustworthy lamp. The experiments being made by or under the supervision of the adjudicators will conduce to that end. These tests are being pushed on with all speed compatible with effectiveness. The more elaborate report of the Royal Commission is awaited with much interest, for it is understood that it will in many respects be exhaustive. Certainly it will have immense scientific value, and will also be of great practical utility and importance.

OLD SHEPHERDS MINE.—"Observer" writes:—The object for which this company was formed is to develope the silver-lead lode from the place the late workers left off when ownership was disputed. Some people who then worked in the mine still live to bear testimony of its great value at the bottom. For the last 40 or more years settlement by the litigants has been anxiously watched by mining kings of the county, its consummation being eagerly grasped by those knowing its capabilities. Progress towards the desired object is so far advanced as to be within a few weeks of unfolding one of the grandest discoveries of silver-lead ore it has ever been in the history of English mining to record. Thus the question just now with county men (who are naturally the best judges, and who generally manage to hold the best mines) seems to be whether these riches shall fall into their hands and be held by Cornish people as usual, or be dispensed among the investing public generally, will entirely depend on those first into the field, present market price being a sorry representation of its intrinsic worth.

AUSTRALIAN GOLD COINAGE.—During the 27 years ending with 1882, there were received at the Sydney Mint, for coinage, 13,250,363 ozs. of gold, valued at 50,590,316*l.*

PRACTICAL MINING—VALUATION OF COPPER ORE, AND PAYMENT OF TRIBUTERS.—No. VI.

METRIC WEIGHTS AND MEASURES.

	To change	into	multiply by.
Weight.	grammes	grs. troy	15·4323
	grammes	dwts. troy	0·6430
	kilogram	lbs. troy	2·6792
	grammes	drachm av.	0·5644
	grammes	oz. avoir.	0·0353
	kilogram	oz. avoir.	35·2739
	kilogram	lbs. avoir.	2·2046
	kilogram	cwts. avoir.	0·0197
	quint. mèt.	cwts. avoir.	1·9684
	milliers	tons (20 cwts.)	0·9842
	grs. troy	grammes	0·0648
	grs. troy	centigram.	6·4799
	dwts. troy	grammes	1·5552
	oz. troy	grammes	31·1035
	lbs. troy	grammes	373·2419
	lbs. troy	kilogram	0·3732
	drachm av	grammes	1·7718
	oz. avoir.	grammes	28·3495
	oz. avoir.	kilogram	0·0283
	lbs. avoir.	kilogram	0·4536
	cwts. avoir.	quint. mèt.	0·5080
	tons (2240 lbs.)	milliers	1·0160
	cwts. avoir.	kilogram	50·8024
	tons (2240 lbs.)	kilogram	1016·0475
Solidity.	cub. millim.	cub. inch	0·00006
	cub. centim.	cub. inch	0·0610
	cub. decim.	cub. foot	0·0353
	cub. decim.	cub. inch	61·0270
	cub. mètre	cub. feet	35·3166
	cub. mètre	cub. yard	1·3080
	cub. inch	cub. centim.	16·3862
	cub. foot	cub. decim.	28·3153
	cub. yard	cub. mètre	0·7645
Length.	millimètres	inches	0·0394
	centimètres	inches	0·3937
	décimètres	inches	3·9371
	décimètres	feet	0·3281
	mètres	feet	3·2809
	mètres	yards	1·0936
	décamètres	yards	10·9363
	décamètres	poles	1·9884
	hectomètres	yards	109·3633
	hectomètres	furlongs	0·4971
	kilomètres	miles	0·6214
	kilomètres	yards	1093·6331
	inches	millimètres	25·3995
	inches	mètres	0·0254
	feet	mètres	0·3948
	yards	mètres	0·9144
	poles, 5½ yds.	mètres	5·0291
	chains, 66 ft.	mètres	0·2012
	chains	décamètres	2·0116
	miles	kilomètres	1·6093
	miles	hectomètres	16·0931
Superficies.	sq. mètres	sq. inches	1550·0591
	sq. mètres	sq. feet	10·7643
	sq. mètres	sq. yards	1·1960
	sq. décimèt.	sq. inches	15·5006
	sq. décimèt.	sq. feet	0·1076
	sq. centim.	sq. inches	0·1550
	sq. millim.	sq. inches	0·0015
	ares	sq. yards	119·6033
	ares	sq. poles	3·9538
	ares	roods	0·0988
	ares	acres	0·2471
	hectares	sq. poles	395·3829
	hectares	roods	9·8846
	hectares	acres	2·4711
	sq. inches	sq. centim.	6·4514
	sq. feet	sq. décim.	9·2900
	sq. yards	sq. mètres	0·8361
	sq. poles	sq. mètres	25·2919
	sq. poles	ares	0·2529
	roods	ares	10·1168
	acres	hectares	0·4047
Capacity.	litres	gallons	0·2201
	litres	quarts	0·8804
	litres	pints	1·7608
	hectolitres	bushels	2·7512
	hectolitres	quarters	0·3439
	gallons	litres	4·5435
	quarts	litres	1·1359
	pints	litres	0·5679
	bushels	litres	36·3477
	sacks	hectolitres	1·0904
	quarters	hectolitres	2·9078
Miscellaneous.	hectogr. per sq. centimètre	lbs. avoir. per sq. inch	1·4223
	kilogr. per sq. mètre	lbs. avoir. per sq. ft.	0·2048
	quint. mèt. per sq. centim.	tons per square inch	0·6349
	lbs. avoir. per sq. inch	kilogr. per sq. centim.	0·0703
	tons per sq. inch	quint. mèt. per sq. centim.	1·5749

THE ST. AGNES MINING DISTRICT.

The large return which the West Kitty Mine is making to its shareholders in the shape of regular dividends, and the prosperous and promising character of the surrounding mines causes considerable interest to attach to the paper on the district, read by Capt. S. BENNETTS at the last meeting of the Mining Institute of Cornwall. The whole coast line between the Chapelporth on the west and the Perranporth on the east, and most probably much beyond those limits has, says Capt. Bennetts, been subjected to great changes at different periods of the world's history, and considering the very contorted conditions of the later deposited slates visible along the cliffs it would seem as if disturbance had commenced in this locality even before the completion of the slate deposit, and, consequently, prior to the formation of the earliest veins. The general configuration of the district has, undoubtedly, undergone a variety of changes also. There is abundant evidence of either a great local upheaval in the channel not far off northwards of the present coast line, or a great depression of the land southwards, probably a combination of both elevation and depression; and, again, the configuration of the locality has been considerably changed by the effects of denudation through long ages.

There is no doubt the present configuration of the surface of this district is very different to its original form when it first appeared above the ocean, and probably prior to the formation of those veins which we call lodes. When those fissures were first formed, by whatever means, a certain amount of slipping down or shifting of one side or the other of the fissures undoubtedly occurred, and as those fissures were not perfect planes their sides became necessarily, in places, separated from each other, and those irregular spaces thus formed became after some time filled with a very different material to the surrounding rock. Again, in the course of time some of those veins had been re-opened, and a further slipping down or shifting of the sides occurred, and a subsequent distinct formation was the result. Even a third and fourth distinct deposit is found in one of the older tin lodes in this district—the Pink lode. There is also another kind of the older veins found not only in this locality, but in other parts of the county also, which seem to have been subjected to no re-opening, and are consequently without any well-defined walls. Then comes another and a totally different series of veins, formed at different periods also, and those, too, in turn became subject to several re-openings, and a consequent sliding or slipping down of one side or the other of the vein. As a consequence those later veins having an opposite dip to the former series, produced by the sliding motion of one side corresponding breaks or faults in the original series of lodes. Those two series of veins have a general bearing nearly east and west, the former being in this locality generally the principal tin-bearing lodes, while the latter have not been found so productive in tin, but have occasionally shown indications of true copper-bearing lodes under suitable conditions. Again, another and in the order of time a much later series of veins were formed totally different from the two former series, and having a general bearing nearly north and south, and the dip in the majority of cases east. This general dip east of nearly all the north and south veins on the east side of the Beacon indicates the upheaval of the Beacon Hill as well as the general depression of the land eastward, and it is interesting to notice that the greater faults produced by those veins are found near the foot of this hill.

It is possible, and very probable, that many of the fissures of those north and south veins were produced nearly, if not quite so early as those veins previously referred to, but their successive re-openings having continued down to a much later period, the veins, properly so called, are of much later date. Those north and south veins are technically called cross-courses on account of their intersecting the other veins at nearly right angles, and wherever they are found crossing either a tin or copper bearing district they are almost entirely devoid of metalliferous ores, save that of sulphide of iron (mundic) in small quantities, and that principally near the intersection of metalliferous lodes. Now all those veins which intersect each other are faults to a greater or lesser extent to all those of an earlier formation, and many of those veins of all ages have been subject to successive re-openings which have produced many perplexing phenomena, and caused much controversy from time to time. Especially has this been the case in reference to the latter class of veins, which often have moved some lodes having similar bearing and dip a greater distance than others; and still more strange, two lodes have been found to have had their positions reversed (in another district, however) on the opposite sides of a cross-course, a phenomenon which is found to be difficult of explanation on any other hypothesis than that of successive re-openings and formations, but is easily understood and explained on such hypothesis. Moreover, we often find in this locality a good deposit of ore on one side of a fault, but not on the other side of it. This, too, is easily accounted for on the hypothesis referred to, but not so easily otherwise. In one case a fine deposit of tin ore was found, some 40 to 50 fms. in length, between two faults, and not a trace of it on the other side of either. Now, in this case there seemed to have been a settling down to a small extent of the strata between those faults and two cross-courses, thereby causing a re-opening of that section of the lode, and permitting the free ingress of those metalliferous waters once more. There was apparently direct evidence of this gradual settling down of the strata in the rich leader of tinstuff itself, which was from 6 to 15 in. wide, and beautifully laminated throughout with rich layers of tin ores, separated by very thin films of quartz, those layers being parallel with the vein. There were other evidences of this settling down in the fracture of the strata near each end of this deposit, and many of the fissures are still open, while others were rich in tin ores. It is also possible that a so-called contrary "heave" may be produced in this way. In this district, however, where the faults are so numerous and grouped together in such comparatively small space, it is hardly likely to be found, and, so far as my experience goes, I have not met with a single fault of that kind in this locality.

Two or three of the tin-producing lodes of this locality which have received the most attention towards their development in depth seem to indicate most clearly a gradual upheaval of the coast line at some very remote period, and probably continued at intervals through many ages; hence the raised beaches along the coast, and probably the sands and clays around the beacon. Those lands and clays have occupied the attention of many geologists from time to time without their being able to assign any definite geological period to their formation, or even to their origin, whether of marine or of fluvatile, but by all they are considered to be very ancient; and being almost, if not entirely, without organic remains, they have been a puzzle to many geologists. Now, in reference to this upheaval, one of the indications to which I refer is the fact of those older lodes having a much greater underlie in the deeper workings than in the shallower. It is difficult to imagine an extensive fissure to have been formed in that manner by whatever cause, and even more difficult to imagine any subsequent re-opening of such fissure. Now, an upheaval in such a way as to produce a sort of bending upwards of the lower portion of a vein must necessarily involve the fracture of the surrounding strata, and this is found to be the case, and most abundantly, too. In addition to the principal faults, there are numerous small and almost perpendicular veins under the Pink lode—often rich in tin—as well as the general dip of the strata southward, all clearly proving to my mind a gradual yet extensive upheaval northwards, without, so far as mining operations have yet discovered, the least appearance of any subsequent depression in that direction; hence the probability of the sands and clays around the Beacon being of very great age, whether of marine or of fluvatile origin, and they must have been through long ages high and dry. On the other hand, there has been a very great depression of the land southwards, which is clearly proved by the extraordinary number of south-underlying veins, and nearly every one of those being a fault to the north-underlying tin veins, varying in extent from a few inches to 30 fathoms. The sum total of those depressions in that direction is very great, probably not less than from 1200 to 1500 feet, even within a half-mile of the present coast line, sufficient in itself to change the whole watershed of this part of the county. In addition to this denudation has undoubtedly been very extensive also, sufficiently so to cause one or two at least of the lodes to form an outcrop at the surface no less than three times in succession. Nothing but denudation will account for this, and all this probably subsequently to the deposition of those lands and clays just referred to. The alluvial deposits from this extensive wearing down may have gone southwards to enrich the tin streams found on that coast.

The remark has often been made that the mines in St. Agnes district "do not make deep." This, however, says Captain Bennetts, is not found to be correct so far as the deepest mining operations have developed. The Wheal Kitty Mine, being the deepest in the district, has had a good deposit of tin in the 140, below the adit. The West Kitty Mine is also tracing it downward. The Pink lode, too, in the Penhalls and the Blue Hills Mines, have already yielded some 250 tons of tin from two of the deepest levels in those mines (the 70 and 80). The idea, probably, originated in this way. The Pink lode, in the old Pink Mine, produced large quantities of tin to the former workers to depths varying from a few fathoms to 60 fms. below the adit, and then became poor throughout the whole extent of the mine; further operations were suspended until the present company resumed, and found the barren ground continued only some 10 to 20 fms. in thickness, below which other deposits of tin were found, and from which over 3000 tons of tin have been raised from that one lode alone in the Penhalls Mine, thus proving, if anything, the very reverse of "not making deep." This idea, too, requires some further explanation, inasmuch as the 80 fm. level, on the Pink lode in the Penhalls Mine, represents a depth on the course of that lode from surface of nearly, if not quite, 300 fathoms, produced by the great number of depressions of the once upper portion of the lode, and this is entirely independent of denudation, which in itself has played a very important part, and so clearly proved, too, by the successive outcrops of the same lode—a circumstance which could not have occurred while the district was submerged. Now, a very important question may arise, How, or by what means, did the various deposits of metalliferous ores get into the veins, and what is the source from which they were derived? These are questions much more easily asked than answered satisfactorily. Large deposits of metalliferous ores are generally found to have certain well-defined directions or dips through the veins. Sometimes they are nearly perpendicular, sometimes they incline east, sometimes west, and at other times they are nearly horizontal; therefore, in searching for metals in any particular mine, this should be ascertained as early as possible, for, as a rule the ores found off this course of productive ground are in small deposits, and not of much value. However, until we have some idea as to how the ores got into the veins in deposits in that way we shall be more or less at fault in our search.

There have been from time to time various opinions as to this, and when we find such variety in the composition of lodes, it is evident they were not all formed in the same way. What I understand by a true fissure vein is one having connection with the deeper portions of the earth's crust, and at one period permitted of the free circulation of water through it (in contradistinction to a dyke of any kind, either large or small, which has been filled with injected material), until it became more or less closed by the deposition of crystalline matter, which compose the vein or lode stuff proper; but then the mineral waters as we now find them do not, I believe, contain tin in solution in any appreciable quantities; therefore some other conditions must have undoubtedly existed so as to render it soluble, and this may have been simply heat and pressure combined, and if only these two agencies are required to be added to the ordinary mineral water so as to render it a solvent for tin it is not difficult to understand how these deposits of tin ores got into true fissure veins.

In this way, as soon as the circulating waters, rich in the various metals from great depths, had reached a point where both heat and pressure became too feeble to hold the metals any longer in solution, they must of necessity become gradually deposited, and that, too, in a more or less crystalline form, and not as a sedimentary deposit; yet on the confines of the rich deposits of tin ores the fibrous oxide of tin is often found associated with the ordinary cassiterite, and occasionally a very near approach to, if not the actual uncrystallised oxide of that metal, indicating the richness of the solution, and at the same time its failure to retain the metal sufficiently long to effectually crystallise the whole of it. The same reasoning will apply to most of the other substances found in lodes. Now, if this view of the formation of metalliferous deposits be correct in some cases (I can easily imagine other modes) the direction of the dip in such cases would represent the pipe or channel through which those waters rich in metals had at one time flowed, and it would also indicate the direction in which to search for deposits of ores.

The discussion which followed the reading of the paper, which was illustrated by many admirably executed diagrams, was of a thoroughly practical and suggestive character, although without the diagrams the report of it would be scarcely intelligible. The CHAIRMAN (Mr. R. J. Frecheville, Her Majesty's Inspector of Mines for the district, and President of the Institute) characterised the paper as a profound and thoughtful production. Capt. Bennetts had referred to the extraction of 250 tons from the 70 and 80 fm. levels in Penhalls, and he would like to know what time the extraction covered.—Capt. BENNETTS: From three to four years.—The CHAIRMAN said he was at one with Capt. Bennetts with regard to the manner in which the fissures had been filled up so as to constitute the lodes.

Capt. BISHOP differed somewhat from Capt. Bennetts in his theory with reference to the continual re-opening of fissures. There were peculiarities to every district, and the diagrams exhibited by Capt. Bennetts were novel to him. He proposed at an early date reading a paper before the Institute on East Pool Mine, and thought as practical miners they should endeavour to instruct each other.—The PRESIDENT in acknowledging the usual vote of thanks to the Chairman, said he was delighted to learn that Capt. Bishop intended favouring them with a paper. If all practical mine agents would make a note of things as they occurred, and came before the Institute with papers, they would do each other good service. If such things had been done in earlier periods the benefits would be reaped by the present generation.

ST. JOHN DEL REY MINING COMPANY (Limited). — Advices received March 13, 1884, ex Mondego (s.), dated Morro Velho, Feb. 18:—

GENERAL OPERATIONS.

GOLD PRODUCE FOR THE MONTH OF JANUARY, 1884.—The total quantity of gold obtained in this period amounts to 17,531·3 oits., equal to 2321·0738 ozs. troy

It has been derived as follows:—

	Oits.	Tons.	Oits. per ton.
Morro Velho stamps	15,136·3 from	5035 =	3·006
Praia ditto	1,130·3 ,,	381 =	2·966
	16,266·6 ,,	5416 =	3·003
Re-treatment, &c.	1,264·7 ,,	— =	·233
Total	17,531·3 ,,	5416 =	3·236

The yield per ton has fallen from 3·700 for the month of December to 3·236 for the current month. This is the main reason for the decreased produce, which is less by 3709 oits. than for the previous month.

COST AND LOSS.

Produce	17,531·3 oits.	
Less loss in melting	97·2 ,,	
	17,434·1 oits., at 7s. 9d. per oit.	£ 6,755 14 3
Cost		6,800 14 0
Loss for the month		£ 44 19 9

It is to be regretted that the operations for the month have resulted in a slight loss. The reason is the decrease in the yield per ton.

MINE.—Mineral raised from the mine ..... 5790 tons.
Mineral quarried per borer per diem ..... 2·41 ,,
Average attendance of borers daily ..... 88·81
Average attendance of natives daily ..... 345·5

SUMP.—This has been sunk during the month 5 ft. vertically, and the sinking lift has been lowered 10¼ ft. The width of pure mineral is about 9 ft. This is owing to the shaft being carried at a flatter angle so as to take in all payable mineral ground, the sump being in the run of mineral much further east than formerly.

No. 1 STOPE, SECTION 320 B.—This stope is now passing through the ridge of killas projecting from the north wall. This seems to have increased in size.

No. 2 STOPE, SECTION 319 B, is nearly 40 ft. wide, and is now in the mixed mineral, of which the middle part of the lode is composed.

No. 3 STOPE, SECTION 319 A.—This is now about 50 ft. wide, 30 of which is in fair mineral. This stope has now advanced past the killas, and is in the mineral which coming from the north wall opens out towards the south.

TRIAL BORINGS.—These have been discontinued, and a small shaft has been started about 15 ft. west of the indent. This shaft is being sunk in what is thought to be the best position for testing the lode. The depth sunk for the month was about 2 fms.

EASTERN RESERVES.—Fair progress has been made in stoping in this section of the mine. The south wall, however, being very heavy, it is contemplated leaving a small pillar of mineral.

GOLD EXTRACTED TO DATE.—The produce for the first division of February, a period of 12 days, amounts to 5447·2 oits., equal to 627·9733 ozs. troy. It has been derived as follows:—

	Oits.	Tons.	Oits. per ton.
Morro Velho stamps	4648·3 from	2074 =	2·241
Praia ditto	338·1 ,,	163 =	2·074
	4986·4 ,,	2237 =	2·229
Re-treatment, &c.	460·8 ,,	— =	·206
Total	5447·2 ,,	2237 =	2·435

MINE.—Return of duty for 13 working days:—
Mineral raised from the mine ..... 2827 tons
Mineral quarried per borer per diem ..... 2·60 ,,
Average attendance of borers daily ..... 83·38
Average attendance of natives daily ..... 322·08

The Gold Troop, taking 9 boxes of bar gold weighing in all 39,218·4 oits. equal to 4521·2436 ozs. troy, was dispatched for Rio and England on the 16th inst.

N.B.—The gold has duly arrived.

CUIABA.—PRODUCE AND YIELD.—The produce for the month is low owing to the landslips on the rego which necessitated the mill being idle for many days. The yield for the first division of the month was very low, only 1·145 oits. per ton, and the average for the month 1·471 oits. per ton.

COST AND LOSS.—The operations for the month have resulted in a loss of 373l. owing to the low yield of the mineral treated, and the mill being idle for about 10 days.

MINE.—This is in good order throughout, and is being opened up as economically as possible.

REDUCTION.—Little can be said about this department until the barrels are working, to see what improvements the double treatment may have on this sand. It will be seen on referring to the report that 111 oits. of gold have been recovered from the waste sand from the settlers. Sand is now being received at Morro Velho to test by grinding in the pan, and afterwards treating in the settlers to see what quantity of gold can be recovered from the tailings.

PRODUCE AND COST.

Cost on working account		£ 749 13 10
Ditto capital—Exploration	£112 10 0	
Rego	176 3 5 =	288 13 5
		£1038 7 3
Less—Value of produce 1645·3 oits., at 8s. 1d. per oit.		664 19 6
Excess of expenditure		£ 373 7 9

TELEGRAMS RECEIVED.—On Feb. 22, dated Rio 22nd:—Produce 12 days, first division of February, 5500 oits.; yield, 2·4 oits. per ton.

On March 15, dated Rio 4th:—Produce 8 days, second division of February, 3000 oits.; yield, 2·0 oits. per ton.

On March 18, *via* United States:—Produce month of February 12,000 oits.; yield, 2·3 oits. per ton.—Cuiaba: 1300 tons stamped; yield 1·5 oits. per ton.

In the Court of the Vice-Warden of the Stannaries.
Stannaries of Cornwall.

IN the MATTER of the COMPANIES ACT, 1862, and of the HERODSFOOT MINING COMPANY.
TENDERS will be RECEIVED by the Registrar of the said Court at his office in Truro, in the County of Cornwall, until Tuesday, the 25th day of March instant, stating the HIGHEST PRICE which will be given for the INTEREST of the company in the HERODSFOOT MINE, as a going concern, near Liskeard, within the said Stannaries, and for the WHOLE of the
MINING PLANT, MACHINERY, MATERIALS, AND EFFECTS
(except all ores now at surface) at and upon the said Mine, of which the undermentioned form portions, viz.:—
ONE 60 inch cylinder PUMPING ENGINE, 10 feet stroke, with three boilers of 12 tons, 10 tons, and 8 tons respectively; one 22 inch steam whim; one 6 inch ditto; one 12 inch air compressor and receiver; one double gear drawing machine; one 60 feet shears and pulleys; one 40 feet poppet heads, with pulleys; one 8 arm capstan, and about 80 fathoms capstan rope; balance bobs; winch and chain; 200 fathoms steel wire rope.
PITWORK.
Pumps and main rods, about 160 fathoms of 12 inch and about 55 fathoms of 8 inch; ladders about 300 fathoms; water wheels of 40 feet, 22 feet, 20 feet, 18 feet diameter, and two of other sizes; two stamp axles, with 24 heads stamps; crusher, jigging machine, and jiggers; extensive dressing floors, with the necessary appliances of round and other buddles, &c.; self-acting frame; about 500 fathoms tramroads and rails; 6 ton weighbridge, and other weighing apparatus; smiths' and miners' tools; account house furniture; and a large quantity of other mining effects.
To inspect the above, apply to the Bailiff in charge at the Mine; and for further particulars at the office of the Registrar.
HODGE, HOCKIN, AND MARRACK, Truro.
(The Solicitors having the carriage of the proceedings in the said Matter.)
Dated Registrar's Office, Truro, March 13th, 1884.

In the Court of the Vice-Warden of the Stannaries.
Stannaries of Devon.

IN the MATTER of the COMPANIES ACTS, 1862 to 1880, and of the RUSSELL COPPER MINE (LIMITED).
TO BE SOLD, under the direction of the Registrar of the said Court, on Wednesday, the 2nd day of April next, at Eleven o'clock in the forenoon, at the Russell Copper Mine, near Tavistock, within the said Stannaries, in One or more Lots, as shall then and there be determined on, and subject to such conditions as shall be then and there produced, the WHOLE of the undermentioned
MINING MACHINERY, MATERIALS, AND EFFECTS
Of and belonging to the said company:—
ONE 7 horse PORTABLE ENGINE; horse whim; shaft tackle; 40 feet shears, with pulleys; shaft bob; balance bob; one 4 inch square wrought shaft, with crane; tooth wheel bearing blocks; pitwork, about 30 tons, consisting of 8 and 9 inch pumps; 4 feet 6 by 6 matchings; 5 feet by 6 windbore; 9 feet by 6 ditto; 10 feet by 5 workings; one 5 inch doorpiece; one 6 inch ditto; three tram wagons; whim kibbles; winze kibbles; 80 fathoms 2 inch wire rope; 63 fathoms 2½ by ⅝ tramroad; 170 fathoms of railroad; several wood sheds; smiths' and miners' tools; new and old iron; borers; borer steel; Norway and other timber; and sundry other effects generally in use in mines; together with the account house and office furniture.
To inspect the above apply to the Bailiff in charge at the mine; and for further particulars at the office of the Registrar.
HODGE, HOCKIN, AND MARRACK, Truro.
(The Solicitors having the carriage of the proceedings in the said Matter.)
Dated Registrar's Office, Truro, March 20th, 1884.

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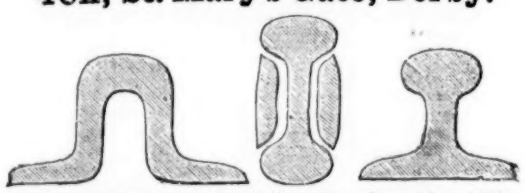

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3200	Blue Hills t, c, St. Agnes§	4 16 6	⅛	⅛ ⅜	0 4 0	0 2 0	May 1881
6000	Carn Brea, c, t, Illogan†§	12 12 11	2¾	2¾ 3¾	52 11 8	0 10 0	Nov. 1881
4000	Craignant Bach,* l, Cardigan	5 0 0	—		0 5 0	0 5 0	Nov. 1882
10240	Devon Gt. Consols, c, a, Tavistock*†	1 0 0	3⅛	3 3⅛	118 7 0	0 6 9	Dec. 1880
4700	Dolcoath, c, t, Camborne	10 14 10	67½	67 69	36 16 0	0 10 0	Mar. 1884
6400	East Pool, t, c, Illogan	0 9 9	38½	37 39	38 17 6	0 18 0	Feb. 1884
12000	Great Holway,* l, Flintshire	5 0 0	—		0 12	0 7 6	Sept. 1883
15000	Great Laxey, l, Isle of Man*†	4 0 0	10½	9½ 10½	29 18 0	0 5 0	Oct. 1883
6400	Green Hurth, l, Durham*	0 6 0	6¾	6 6¾	4 16 0	0 5 0	Dec. 1883
9830	Gunnislake (Clitters), t, c	2 2 0	1	¾ 1	0 19 9	0 2 0	Mar. 1882
2800	Isle of Man, l, Isle of Man*	25 0 0	—		83 5 0	1 0 0	Sept. 1880
6000	Killifreth, t, Chacewater	4 3 6	⅛	⅛ ⅛	0 14 6	0 2 0	Nov. 1883
20000	Leadhills,* l, Lanarkshire	8 0 0	2⅝	2⅜ 2⅝	1 5 6	0 3 6	Sept. 1883
400	Lisburne,* l, Cardiganshire	18 15 0	—		615 0 0	0 10 0	June 1883
10000	Mellanear, c, Hayle*	2 0 0	1¼	1 1¼	2 4 3	0 0 6	Jan. 1884
9000	Minera Mining Co., l, Wrexham*	5 0 0	6½	5½ 6½	69 11 8	0 2 0	Feb. 1884
20000	Mining Co. of Ireland, cl, c, l*	7 0 0	—		24 0 0	0 2 6	Jan. 1880
11829	North Hendre, l, Wales	2 10 0	—		3 18 0	0 4 0	Nov. 1882
8146	Ditto	1 5 0	—		0 11 3	0 2 0	Nov. 1882
2000	North Levant, t, c, St. Just	13 6 0	—		4 16 0	0 3 0	Feb. 1881
4760	Penhalls, t, St. Agnes§	4 5 0	⅜	¼ ⅜	3 17 0	0 1 6	Jan. 1881
12000	Phœnix United, t, c, Linkinhorne§	6 2 9	1⅛	⅞ 1⅛	17 7 8	0 1 6	Apr. 1883
12000	Roman Gravels, l, Salop*	7 10 0	5	4½ 5	9 11 0	0 5 0	May 1883
6123	South Condurrow, t, c, Camborne†	7 5 7	9	8½ 9	10 15 6	0 10 0	Jan. 1884
9000	South Darren, l, Cardigan*	1 16 0	⅝	⅜ ⅝	0 4 0	0 2 0	Apr. 1880
6000	Tincroft, c, t, Pool, Illogan†§	13 12 6	3¾	3¼ 3¾	51 3 6	0 5 0	Dec. 1881
15000	Van, l, Llanidloes*	4 5 0	2½	2 3	25 13 0	0 2 6	Jan. 1883
15000	West Holway,* l, Flintshire	1 0 0	1¼	¾ 1¼	0 1 0	0 1 0	Oct. 1881
6000	West Basset, c, Illogan†§	7 10 4	2½	2¼ 2½	28 3 8	0 6 8	Apr. 1882
6000	West Kitty, t, St. Agnes	0 12 0	13	12 13	1 19 0	0 11 0	Nov. 1883
12000	Wheal Crebor, c, Tavistock	2 4 0	1¾	1½ 1¾	1 1 3	0 2 6	Nov. 1883
1024	Wheal Eliza Consols, t, St. Austell	18 0 0	—		59 0 0	1 0 0	Nov. 1883
6000	Wheal Grenville, t, Camborne	15 0 0	5¼	5 5¼	1 17 6	0 2 6	Mar. 1884
4295	Wheal Kitty, t, St. Agnes§	5 12 0	⅝	⅜ ⅝	12 18 6	0 1 6	Jan. 1881
3000	Wheal Peevor, t, Redruth§	13 1 0	1¼	1 1¼	8 13 6	0 4 0	Mar. 1881

FOREIGN DIVIDEND MINES

Shares.		Paid.	Last wk.	Clos. pr.	Total divs.	Per sh.	Last pd
35500	Alamillos, l, Spain*†	2 0 0	1¾	1½ 1¾	2 15 2	0 2 0	Mar. 1884
130000	Almada and Tirito Consol., s*†	1 0 0	⅜	¼ ⅜	0 6 3	0 1 0	May 1876
20000	Australian, c, South Australia†	7 7 6	3	2½ 3	1 9 6	0 2 0	Aug. 1883
15000	Birdseye Creek, g, California*	4 0 0	1¼	1 1¼	1 5 0	0 1 0	Jan. 1884
30000	Bratsberg,* c, Norway†	2 0 0	2	1½ 2	0 4 4½	0 1 2¼	Mar. 1884
130000	California,* g, Colorado	1 0 0	¾	9/16 11/16	0 2 0	0 1 0	Aug. 1883
20000	Cape Copper Mining,*† South Africa	8 0 0	45	43 45	56 7 6	1 0 0	Mar. 1884
65000	Colorado United, s-l, Colorado*†	5 0 0	2¾	2¼ 2¾	0 14 6	0 1 0	May 1883
50000	Copiapo, c, Chili* (£4 shares)†	3 10 0	3	2¾ 3	2 14 3	0 3 0	Dec. 1883
70000	English & Australian,*† c, S. Aust.	2 10 0	—		3 2 9	0 2 0	Mar. 1883
2000	Eng.-Aus., g, Vict.* pref. (20000 o.)	1 0 0	—		0 3 8	0 3 8	Apr. 1882
25000	Fortuna, l, Spain*†	2 0 0	3	2¾ 3	8 11 5	0 3 2	Mar. 1884
72000	Frontino & Bolivia, g, New Gran.*†	2 0 0	1⅛	⅞ 1⅛	0 12 0	0 1 0	Dec. 1883
270000	Henriett,* l, Leadville, Colorado	1 0 0	—		0 0 9	0 0 5	Feb. 1883
200000	La Plata, s-l, Leadville†	2 0 0	⅜	¼ ⅜	0 12 11	0 1 3	Oct. 1882
5000	Linares, l, Spain*†	3 0 0	3	2½ 3	19 10 4	0 3 0	Mar. 1884
20000	Marbella Iron Ore, *, Spain	10 0 0	4	3½ 4	0 10 0	0 10 0	June 1882
185164	Mason & Barry* c, Portugal	10 0 0	12½	11¾ 11¾	3 0 0	0 10 0	Oct. 1883
80659	QuebradaRail.,Land,&Cop.Venezuel	10 0 0	5¼	4½ 5	6 per cent.		1882
50000	Panulcillo, c, Chili*†	4 0 0	5¼	4¾ 5¼	1 18 9	0 3 0	Nov. 1883
25000	Pitangui,* g, Brazil (in. 6000 £1 pd).	0 10 0	—		0 1 0	0 1 0	Sept. 1880
1400	Pontgibaud, s-l, France†	20 0 0	8	6 8xd	30 3 1	0 11 3	Dec. 1883
100000	Port Phillip, g, Clunes*† (£2 shares)	1 0 0	⅜	0 ⅜	1 14 2	0 0 10	Feb. 1881
50000	Rara Fortuna,* s, Argent. Republic.	1 0 0	—		0 3 0	0 1 0	July 1882
54000	Richmond Consol., s, Nevada*†	5 0 0	4	3½ 4	14 16 6	0 5 0	Aug. 1883
24532	Rio Tinto,*c, Mortgage Bds., Huelva.	100 0 0	101	101 103	5 per cent.		July 1880
325000	Ditto, shares	10 0 0	19½	18½ 19½	2 18 0	0 16 0	May 1883
40000	Santa Barbara,* g, Brazil	0 10 0	—		0 12 9	0 1 0	May 1882
122000	Schwabs Gully, d, Kimberley	10 0 0	10⅜	8 8¼	5 2 6	0 10 0	Jan. 1884
120000	Scottish-Australian Mining Co.*†	1 0 0	2½	2¼ 2½	15 p. cent.	0 1 6	Nov. 1883
80000	Ditto, New	0 10 0	1½	1¼ 1½	15 p. cent.	0 0 9	Nov. 1883
22500	Sierra Buttes, g, California*†	2 0 0	1¼	1⅛ 1⅜	2 6 0	0 1 0	Oct. 1883
40625	Ditto, Plumas Eureka	2 0 0	1⅜	1¼ 1½	3 0 0	0 2 0	Oct. 1883
253000	St. John del Rey*† (£5 Stock and multiple dealt in)		50	60	5 p.c. for half-year, June		1882
160000	Tambracherry,* g, Wynaad	1 0 0	—		0 0 6	0 0 6	Aug. 1882
625000	Tharsis,* c, sul, Spain (587330 issued)†	2 0 0	6½	6 6½	6 18 6	0 11 0	May 1883
20000	Tolima,* g, s, Colombia (A & B shares)	5 0 0	8½	7½ 8½	3 16 6	0 10 0	Jan. 1884
25000	Victoria* (London), g, Australia	1 0 0	—		0 13 10	0 0 8	Feb. 1881
100000	Victorine (Nevada, U.S.) Deb. Bds.	1 0 0	—		0 2 0	0 0 6	June 1882
15000	Western Andes, s, Colombia	5 0 0	5¼	4¾ 5¼	4 5 9	0 2 6	Oct. 1883
2100	W. Prussian (5500 pref. sh. £10 pd.)	10 0 0	7	6 7	4 2 0	0 8 0	Apr. 1881
64800	Yorke Pen., c, South Aust. Pref.†	1 0 0	⅞	⅝ ⅞	0 3 0	0 3 0	May 1882

§ Have made calls since last dividend was paid.

NON-DIVIDEND BRITISH MINES.

Shares.		Paid.	Last wk.	Clos. pr.
25000	Aberduna,* l, Denbigh	1 10 0	1¼	1 1¼
12000	Anderton, t, c l, Devonshire	1 2 6	—	
12000	Assheton, l, Carnarvonshire*	5 0 0	—	
12000	Bedford Unit.,* c, Tavis.(£1 liab.)	0 14 0	1⅜	1⅛ 1⅜
30000	Bodidris,* l, bl, Denbighshire	1 0 0	—	
10000	Brada, * l, Isle of Man	1 0 0	—	
30000	British,* s-l, bl, Wrexham	1 0 0	¼	
20000	British Manganese Company*	1 0 0	—	
30000	Beuno Consols,* s-l, Flintshire	1 0 0	2¼	¾ 1
20000	Bwlch United,* l, Cardigan	1 0 0	⅜	½ ⅜
12000	Collacombe Consols, c, bl, Lamerton	0 2 6	—	
50000	Carn Camborne,* t, c, Camborne	1 0 0	1½	1¼ 1½
37500	Carnarvonshire Cons.,* l, Llanrwst.	2 0 0	1	½ 1
6400	Cashwell,* l, Cumberland‡	2 19 0	1⅜	1⅛ 1⅜
6000	Cathedral, c, t, Gwennap	1 6 6	⅜	½ ⅜
20000	Central Foxdale,* l, Isle of Man	1 17 6	—	
25000	Coed-y-Fedw&Pant-y-Buarth,* l	1 0 0	1¾	1¼ 1¾
2450	Cook's Kitchen, t, Illogan†	33 14 9	13	10 11
30000	Creigiog,* l, bl, Denbighshire	0 17 0	⅞	⅝ ⅞
6400	Crook Burn,* l, Cumberland	0 17 0	—	
48723	D'Eresby Mountain, l, bl, Llanrwst.	0 10 0	⅜	¼ ⅜
12000	Derwent,* l, Durham	4 0 0	—	
60000	Devon Friendship,* c, ars, Tavistock	1 0 0	3/16	⅛ 3/16
12000	Devon Great United* (2l. shares)	1 17 6	½	⅜ ⅝
50000	Drakewalls,* t, c Calstock	0 15 0	8s.	3/16 ¼
50000	Duchy Peru,* bl, , s, Cornwall	1 0 0	1 5/16	1 3/16 1 5/16
12000	East Blue Hills, t, St. Agnes	0 5 0	⅜	¼ ⅜
6000	East Botallack, t, St. Just	1 0 0	—	
6144	East Caradon, c, St. Cleer‡	4 19 0	¼	⅛ ¼
4000	East Chiverton, l, Perranzabuloe	10 17 3	—	
30000	E. Craven Moor,* l, Pateley Bridge	1 0 0	—	
15000	East Devon Cons.,* c, Buckfastlgh.	2 0 0	½	⅜ ½
20000	East Long Rake,* l, Wales	1 0 0	—	
25500	East Roman Gravels,* l, Salop	1 0 0	⅜	⅛ ⅜
18000	East Van, l, Llanidloes*	5 0 0	—	
2048	East Wheal Lovell, t, Helston	18 18 6	⅞	¾ 1
100000	East Wheal Rose,* s-l, Newlyn East	1 0 0	⅛	⅜ ½
25000	Ecton,* c, Wetton	1 0 0	2½	2 2¼
12500	Frongoch,* l, Cardgn (11000 sh.iss.)	2 0 0	⅜	
12000	Gawton,* c, Tavistock	2 0 0	⅜	¼ ⅜
40000	Glasg. Car.,c* [30000sb. £1 pd., 10000 15s. pd.]		¼	
30000	Gobbett,* t, Devon	1 0 0	1⅛	⅞ 1⅛
10000	Goddards,* l, o, Carnarvon	1 0 0	1⅞	
32000	Goginan,* l, Cardiganshire	1 0 0	⅜	¼ ⅜
25000	Goodevere, t, St. Cleer	1 0 0	1¼	1 1¼
8500	Gorsedd and Merllyn Con., l, Flint.	2 10 0	3	2¼ 3
6000	Great West Chiverton, l, St. Agnes.	0 6 6	½	⅜ ½
50000	Great W. Shepherds* l. Cornwall	0 5 0	¼	3/16 1/16
20000	Grogwinion, l, Cardigan*	2 0 0	¾	
10000	Gwern-y-Mynydd,* s-l, Flint(pref.)	4 0 0	1	⅞ 1
70000	Gwydyr Amal.* l, bl, Carnarvon	1 0 0	—	
8400	Hardshins,* l, Westmore. (10s. sh.)	0 2 6	3/16	⅛ 3/16
12000	Herodsfoot, l, near Liskeard†	1 6 0	¼	⅛ ¼
18000	Hingston Down, c, Calstock*†	0 13 0	¼	⅛ ¼
35000	Holway Consols,* l, Flintshire	1 0 0	1¼	¾ 1¼
25000	Kit Hill Gt. Cons.* c, ars-m, (2l. sh.)	1 2 6	⅛	1/16 ⅛
15000	Lady Ann,* s-l, Llanarmon	1 0 0	—	
25000	Langford,* s, c, Callington	0 10 0	⅜	¼ ⅜
15000	Llandegla,* l, Wales	1 0 0	—	
5120	Lovell, t, Wendron	0 16 0	⅜	⅛ ⅜
9000	Marke Valley, c, Linkinhorne‡	7 11 0	⅜	⅛ ⅜
6000	Medlyn Moor, t, Wendron	3 15 0	—	
8000	Mona,* c, Anglesea	5 0 0	—	
20000	Mona Consols,* c, Anglesea	1 0 0	⅜	⅛ ⅜
15000	Monkstown,* man, Devon	2 0 0	—	
20000	Mostyn Consols,* s-l, Flint.	1 0 0	¾	½ ¾
12000	Morfa Du, z, g, s, Anglesea*	1 0 0	—	
80000	Mounts Bay,* c, t, Breage	1 0 0	⅜	¼ ⅜
6144	Mount Carbis, t, c, Redruth	1 15 0	3	2 3
12000	New Caradon, c, St. Cleer	0 5 0	¼	⅛ ¼
2400	New Cook's Kitchen, t, Illogan	9 13 6	1½	1⅛ 2
8000	New Dolcoath, t, c, Camborne*	3 0 0	—	
10000	New Holmbush,* t, c, Callington	3 0 0	—	
6000	New Kitty, t, St. Agnes	1 2 0	1⅞	1⅝ 1⅞
15000	New Redmoor,* var, Callington	1 5 0	—	
17500	New Terras,* t, St. Austell	1 0 0	½	¼ ½
3500	New Tincroft,* t, Lelant	6 0 0	—	
12000	New Trumpet,* t, Wendron	1 0 0	1½	1 1½
80000	New Van Cons. & Glyn,* l,	7 0 0	½	⅜ ½
12000	New West Caradon, c, Liskeard	0 6 0	4s.	2s. 4s.
3000	New Wheal Peevor, t, Redruth	0 10 0	—	
12000	North Blue Hills, t, St. Agnes	0 2 6	1/6	1s. 1s. 6d.
5328	North Busy, t, c, Scorrier ‡	1 19 8	¼	⅛ ¼
10000	N. D'Eresby Mount.,* l, bl, Carnarv.	1 0 0	—	
25000	North Goginan,* l, Cardiganshire	1 0 0	—	
6400	North Green Hurth,* (3400 1l. pd.)	0 2 6	—	
25000	North Grogwinion,* s-l, Cardigshr	1 0 0	⅜	¼ ⅜
12000	North Herodsfoot, l, Liskeard	0 13 6	—	

NON-DIVIDEND MINES—continued.

Shares.		Paid.	Last wk.	Clos pr.
50000	North Molton,* c, mn, s, Devon	1 0 0	—	
6000	North Penstruthal, t, c, Gwennap	3 4 6	½	⅜ ½
2936	North Treskerby, c, St. Agnes	1 0 0	—	
8000	Northern,* l, Durham	8 17 10	—	
40000	Okel Tor,* t, c, a, Calstock	1 0 0	—	
80000	Old Shepherds s-l, Cornwall	1 0 0	1⅛	1 1/16 1 1/16
60000	Owen Vean & Tregur.,* t, c, Marazion	1 0 0	1½	1 1½
45000	Parys Corporation,* c, Anglesea	1 0 0	3s.	
7500	Pateley Bridge, l, Yorkshire	1 0 0	—	
6000	Pedn-an-drea, t, Redruth	4 7 0	½	⅜ ½
6000	Pennant, l, bar, North Wales*	5 0 0	5	4½ 5
20000	Penegarreg, l, Carmarthenshire	1 0 0	—	
15000	Pen-yr-Orsedd,* l, Flintshire	1 0 0	½	¼ ½
15000	Perran Consols,* s-l	1 0 0	—	
12000	Perran Wheal Alfred, c	0 2 6	—	
10000	Polberro, t, St. Agnes	0 2 0	1½	1¼ 1½
6000	Polcrebo, t, Crowan	0 16 6	2	1½ 2
4516	Polrose, t, Cornwall	1 12 0	½	¼ ½
10000	Port Nigel Syn.,* s-l, Carnar.(4000 is.)	0 15 0	—	
18000	Pr. Patrick,* s-l, (als.12000 pf.10 p.c)	1 0 0	—	
12000	Prince of Wales, c, s, Calstock	1 6 0	⅛	⅜ ½
36000	Russell United,* c, Tavistock	0 15 6	½	⅜ ½
30000	Silver Hill,* Callington	1 0 0	—	
50000	Sinclair,* l, bl, Whitford	1 0 0	1½	1 1½
40000	Sortridge,* c, Horrabridge	1 0 0	⅛	1/16 ⅛
50000	South Caradon,* c, St. Cleer†	1 0 0	⅜	¼ ⅜
6000	South Carbis, t, c, Redruth	0 10 0	1½	1¼ 1½
42000	So. Devon Unit.,* c, Buckfastleigh.	1 0 0	⅜	¼ ⅜
5000	South Dolcoath, c, t, Illogan	0 19 0	1	¾ 1
6000	South Kitty, t, St. Agnes	0 10 0	⅝	⅜ ⅝
6000	South Penstruthal, t, c, Gwennap	3 10 6	½	⅜ ½
30000	So. Phœnix&Caradon,* t, c, Linkinhn.	1 0 0	1¼	1 1¼
6000	South Tolcarne, t, c, Camborne	5 11 6	—	
2043	South Wheal Crofty, c, Illogan	5 19 6	3	2 3
6000	South Wheal Frances, t, Illogan†	9 19 4	6½	6½ 7
40000	Tamar, s-l, Bearalston*	1 0 0	1	½ 1
110000	Tankerville Gt. Consols, l, Salop*.	1 0 0	2s.	1s. 2s.
12000	Trebartha Lemarne, t, Northill	0 6 3	¼	⅛ ¼
6000	Tregembo, t, c, Cornwall	4 0 0	—	
50000	Tregontraes and Old Polgooth Con.	1 0 0	⅛	1/16 ⅛
100000	Tresavean,* t, c, Gwennap	1 0 0	9/16	⅜ ½
60000	Trevarren United,* t, Cornwall	1 0 0	—	
8000	Trevaunance, t, St. Agnes	0 5 0	2½	2 2½
1000	Vaughan,* l, Cardiganshire	10 0 0	—	
50000	Weardale,* l, Northumber. (4l. share)	1 2 6	1½	1¼ 1½
12000	West Assheton, l, Carnarvon	1 0 0	—	
12000	West Caradon c, St. Cleer	0 9 3	4s.	2s. 4s.
30000	West Cornwall,* t, Cornwall	1 0 0	1½	1 1½
3000	W. Craven Moor, l, Pateley Brdge*	10 0 0	—	
12000	West Crebor, c, Tavistock	0 11 6	3s.	2s. ⅛
10240	West Devon Consols, c, Calstock	1 2 0	¼	⅛ ¼
10000	West Godolphin, t, c, Breage	1 3 6	1¼	1 1¼
12000	West Gonamena, c, St. Cleer	0 1 0	⅛	1/16 ⅛
20000	West Lisburne,* l, Cardigan	1 0 0	⅜	¼ ⅜
3000	West Mary Ann, l, Menheniot	1 18 0	⅜	⅛ ¼
30000	Westminster Consols,* l, Flintshire‡	1 0 0	1¼	
20000	W. Pateley Bridge, l, Yorkshire	1 0 0	—	
12000	West Phœnix, t, Linkinhorne	1 5 0	⅜	⅛ ¼
6000	West Polbreen, t, c, St. Agnes	0 11 0	1⅛	⅞ 1⅛
5190	West Poldice, St. Day‡	7 10 6	⅜	⅛ ⅜
2048	West Wheal Frances, t, Illogan‡	39 15 3	8	7½ 8
3000	West Wheal Peevor, t, Redruth	4 0 6	⅛	⅛ ¼
2400	West Wheal Seton, c, Camborne†§	19 10 0	4½	3½ 4½
6000	Wheal Agar, c, Illogan‡	19 6 0	12½	12½ 12¾
6144	Wheal Basset, c, Illogan‡	8 19 6	3½	2¾ 3¼
4000	Wheal Benny,* c, t, Latchley	5 0 0	—	
3000	Wheal Boys, t, Redruth	1 3 6	—	
50000	Wheal Castle,* c, t, St. Just	1 0 0	—	1 1¼
12000	Wheal Coates, t, St. Agnes	0 10 6	¼	⅛ ¼
2585	W.Comf., & No. Tres., t, c, Gwennap	3 2 0	1	¾ 1
30000	Wheal Britannia, t, c, Gwennap	1 0 0	⅛	¼ ⅜
50000	Wheal Elizabeth,* t, Cornwall	1 0 0	—	
12288	Wheal Jane, t, Kea‡	3 3 0	⅜	¼ ⅜
12000	Wheal Jewell, c, St. Hilary	1 0 6	⅜	⅛ ¼
25000	Wh. Hony and Trelawny, s-l, Lisk.	2 0 0	⅜	
12000	Wheal Lusky, t, Callington	0 3 9	¼	⅛ ¼
2000	Wheal Owles, t, St. Just‡	7 3 0	—	
30000	Wh.Silver & Lanteglos,* s-l, Camelfd.	1 0 0	1¼	1 1¼
6000	Wheal Sisters, t, Lelant	4 2 6	⅜	¼ ⅜
4096	Wheal Uny, t, c, Redruth	19 9 6	½	¼ ⅜
21866	Wye Valley, l, Montgomery.*	1 0 0	⅜	
60000	Yeoland Consols,* t, Devonshire	0 12 6	⅜	⅛ ¼
4000	Ystwith,* l, Cardigan	1 0 0	⅛	

bl, blende; c, copper; g, gold; l, lead; s, silver; sl, slate; s-l, silver-lead; t, tin; z, zinc; i, iron; a, arsenic; d, diamond. Limited Liability Companies; † quoted on the Stock Exchange. ‡ have paid dividends.

NON-DIVIDEND FOREIGN MINES; FOREIGN AND MISCELLANEOUS STOCKS; TRAMWAYS; INSURANCE COMPANIES; GAS, IRON AND COAL, WAGON COMPANIES, &c.

NON-DIVIDEND FOREIGN MINES.

Shares.		Paid.	Clos. pr.
80000	Akankoo,* g, Gold Cst.(100000 iss.)	0 17 6	5/16 7/16
64880	Anglo-African,* d, Kimberley,†	10 0 0	1½ 2½
65000	Anglo-Mexican,* (also 325 sh. £1)	5 0 0	
12000	Arendal, c, Norway	4 0 0	
20000	Asia Minor,* s-l, Lidjessy, Sivas	0 15 0	⅜ ⅝
28000	Belt,* c, Lake Sup., (22000 £4 paid)	5 0 0	
40000	Brazilian, g,* Brazil	1 0 0	
200000	British Australian,* g, N. So. Wales	1 0 0	
18000	Broadway,* g, California	5 0 0	⅜ ⅝
10000	Buena Ventura,* l, Spain (fy.pd)	2 0 0	
80000	Callao Bis,* g, Venezuela	1 0 0	1/16 3/16
15000	Canada,* g	1 0 0	
82500	Canadian, c, sul,* Canada†	4 0 0	⅜ ½
23000	Central Jagersfontein Diamond*	5 0 0	¼ ¾
00000	Cherambadi (Wynaad) District,* g.	1 0 0	
00000	Chile,* g, Venezuela	1 0 0	⅜ ⅝
75000	Colar,* g, Mysore	0 15 0	
75000	Colombian Hydraulic, g, Colombia	1 0 0	¼ ⅜
68000	Cootacovil,* g, Wynaad	0 15 0	
25000	Chontales, g, s, Nicar.*† (108749 iss)	1 0 0	⅜ ¾
2000	Clear Creek, * s, Colorado	1 0 0	
120000	Devala Central,* g, Wynaad	1 0 0	
100000	Devala Moyar,* g, Wynaad†	1 0 0	1/16 3/16
75000	Devala Provident,* g, Wynaad†	0 10 0	
100000	Dingley Dell,* g, Devala, India	1 0 0	
125000	Don Pedro North del Rey*	1 0 0	
205168	Eberhardt, s, Nevada*†	1 0 0	3/16 5/16
65000	Eureka,* s, Nevada	1 0 0	
100000	Exchequer, g, s, California*†	1 0 0	1/16 3/16
60000	Flagstaff District,* s.g. Utah	1 0 0	
40000	Georgia,* g, United States	10 0 0	
85000	Gold Coast,* g, Wassau	1 0 0	
40000	Gold Hill,* g, North Carolina	1 0 0	¼ ⅜
250000	Gold Mining Assn. of Canada*	1 0 0	
75000	Great Southern Mysore,* g	1 0 0	
20000	Hoover Hill,* g, North Carolina	1 0 0	⅛ ¼
12000	Hultafall,* l, bl, Orebro, Sweden	5 0 0	
400000	Indian Consolidated,* g	1 0 0	1/16 3/16
240000	Ind. Glenrock,* g, Wynaad†	1 0 0	1/16 3/16
100000	Iron Gate* cl. chr. Hungary	1 0 0	1 1¼
150000	Isabelle,* g, s, California	1 0 0	
100000	I.X.L., g, s, California*	1 0 0	1/16 3/16
60000	Javali, g, Nicaragua*	2 0 0	
100000	Kapanga,* g, New Zealand	1 0 0	⅛ ¼
100000	Kohinoor,* s, Colorado	1 0 0	⅜ ½
100000	Lisbon-Berlyn,* g, South Africa	1 0 0	11/16 13/16
65000	London and California, g*†‡	2 0 0	
135000	Madras,* g, Mysore	1 0 0	
100000	Michipicoten,* nat. c, Quebec	1 0 0	⅜ ⅝
9000	Missouri, l, pref (fully paid)	10 0 0	
50000	Moselle,* l, b-l, Germany	1 0 0	
85000	Mysore,* g, India†	1 0 0	1/16 3/16
75000	New Callao,* g, Venezuela	1 0 0	¼ ⅜
78500	New Emma,* s, Utah	10 0 0	⅜ ⅝
37000	N. Gold Run,* hyd, Cal. (& 23000 pref	1 0 0	
200000	Nouv. Monde, g, Ven. (en com.)†.	1 0 0	1/16 3/16
100000	Nundydroog,* g, Mysore	1 0 0	
50000	Olathe,* s-l, Leadville, Colorado	1 0 0	
125000	Ooregum,* g, Mysore	1 0 0	
12000	Oregon, g, U.S. (4000 prf. sh.)	0 2 6	
15000	Organos,* g, Colombia	1 0 0	
20000	Orita,* g, Colombia	1 0 0	
75000	Oscar,* g, Norway (£1)	0 5 0	
80000	Ouro Petro* g, Brazil	5 0 0	4⅛
80000	Pestarena United, g, Italy*†	5 0 0	
100000	Pierre d'Or,* g, Spain	1 0 0	
20000	Pierrefitte* (20000 pref.)	1 0 0	
100000	Placerville, g, q, California	1 0 0	
49000	Potosi,* g, Venezuela†	1 0 0	⅜ ¾
40000	Ravenscliff g, N. Zind; s, S. Aust.	1 0 0	
90000	Rhodes Reef,* g, Wynaad†	1 0 0	1/16 3/16
25000	Rico, s, Colorado (non.-assessable).	2 0 0	
5800	Rio Grande do Sul* (and 31,000 pref.)	5 0 0	
100000	Rosa Grande, g, Brazil*† (£1 sh.).	1 0 0	
25250	Ruby and Dunderberg, g, Nev.*†	10 0 0	⅛ ¼
9000	Santa Cruz,* (ex. 10s. retd. cap.)	1 0 0	

NON-DIVIDEND FOREIGN MINES—continued.

Shares.		Paid.	Clos. pr.
250000	Sentein,* s-l, bl, Ariège, France	1 0 0	1/16 ⅛
200000	Silver Chord,* s, Colorado	1 0 0	11/16 13/16
150000	Silver Peak,* s, Colorado	1 0 0	
00000	Souback & Catir Alan,* g s-l, Turkey	1 0	
207363	So. Austral. Cop. Mines (Corp. of)	1 0 0	¼ ⅜
50000	S. A. Gold Explor. and Land	1 0 0	1½ 2
100000	South-East Wynaad, g, India†	1 0 0	1/16 3/16
100000	Spitzkop,* g, Transvaal	1 0 0	¾ 1
250000	Taunus,* s-l, c, Germ.(& 100,000pf.)	1 0 0	
100000	Tocopilla,* c, Bolivia	0 15 0	⅛ ¼
43174	United Mexican,*†‡ s, Mexico	29 12 9	9¼ 9¾
50000	Virneberg, c, Rheinbreitb., Ger.*	2 0 0	
200000	Victoria,* g, Venezuela	1 0 0	⅞ 1
120000	Wentworth,* g, Wynaad	1 0 0	1/16 3/16
75,000	West Callao,* g, Venezuela	1 0 0	4s. 6s.
100000	West Frntno & Boliv.,* g, Colombia	1 0 0	
80000	Wynaad Perseverance,*† g	1 0 0	1/16 3/16
75000	Yorke Peninsula, c, So. Australia†	1 0 0	⅛ ¼
140000	Yuba River,* g, hyd California	1 0 0	

INSURANCE COMPANIES.

Issue.	Shares.		Pd.	Clos. pr.
50000	100	Alliance British and Foreign	11	37 39
10000	100	Ditto, Marine	20	20 22
50000	20	British and Foreign Marine [L].	4	20½ 21½
550000	50	Commercial Union	5	18 19
50000	50	Eagle	5	6 6½
5000	10	Globe Marine [L]	2	1¼ 1¾
27500	100	Imperial Life	10	22 24
13453	100	Indemnity Marine	50	14 15
100000	10	Lion Fire [L]	1¼	⅝ ⅞
49626	20	L'pool & Lond. Globe (£1 annty)	2	23½ 24½
35862	25	London	12½	52 55
40000	25	London and Lancashire Fire	2½	4½ 5
50000	20	London and Provincial Marine [L]	2	4 4½
40000	25	Marine [L]	4½	27 28
50000	10	Merchants' Marine [L]	2	1 1½
50000	10	Maritime [L]	2	3½ 4
80000	25	North British and Mercantile	6¼	26 28
30000	100	Northern	10	41 43
40000	25	Ocean Marine	5	5¼ 5¾
	—	Phœnix	—	200 210
200000	10	Queen	1	2 2½
100000	10	Railway Passengers	21s.	7 7½
200000	50	Rock Life	½	7¾ 8¼
50000	10	Sea	2	—
135000	20	Lancashire	2	4¾ 5¼
4000	20	Standard Marine	4	—
10000	20	Thames and Mersey Marine [L].	2	10¼ 10¾
40640	20	Union Marine, Liverpool [L]	3½	4½ 4¾
50000	20	Universal Marine [L]	3	6½ 7

MISCELLANEOUS.

Shares.	Company.	Paid.	Price.
10	Anglo-American Brush	8 0	2⅜ 2⅝
10	Ditto do.	10 0	4¼ 4¾
5	Australasian Electric	3 0	—
25	Australian Agricultural	21 10	108 112
5	British Colonial & Gen. Invst.	5 0	5¼ 5½xd
1	Gen. Loan Discount & Mort.	1 0	1 1/16 1 3/16
5	Hammond Elect. L. & P. Sup.	5 0	1¼ 1½
1	Home Mines Trust	1 0	15/16 1 1/16
5	Indian and Oriental Electric	2 0	
10	John Vernon Hope & Co.	5 0	5½ 5¾
10	Ditto, preference	10 0	10½ 11
1	Maxim-Weston Electric	1 0	½ ¾
10	Nat. Stan. Land, Mort. & Inv.	5 0	5¼ 5½
Stk.	Scottish Australian Invt. Co.	100 0	235 245
Stk.	Ditto New Ordinary	90 0	225 235
Stk.	Ditto 6 per c. guar. pref.	100 0	130 135
Stk.	Ditto 5 per c. guar. pref.	100 0	110 115
5	Swan United Electric	2 10	½ ¾
10	United Asbestos	10 0	1½ 2
1	Zeodone [L]	1 0	1/16 3/16

IRON AND COAL COMPANIES.

Shares.	Company.	Paid.	Price.
5	Alltami Colliery Co. [L]	5 0	
100	Ashbury Co. [L] (new)	90 0	26½ 27½
3	Bagnall, John, and Sons [L]	3 0	
10	Benhar Coal Co. [L]	10 0	
100	Bilbao River& Cantabrian R. Co.	100 0	5½ 6
20	Bolckow, Vaughan, & Co. [L] A	12 0	10 11
50	Brown, Bailey, and Dixon [L]	40 0	
100	Brown, John, and Co. [L]	75 0	56 59
100	Cammell and Co. [L]	80 0	68 68½
20	Cannock & Huntington Coal [L]	10 0	10½ 10 dis
10	Central Swedish Iron &Stl. [L]	10 0	
50	Charlton Iron Co. [L]	50 0	
10	Chillington Iron Co. [L]	10 0	¾ 1¼
10	Consett Iron Co. [L]	7 10	20 21
1	Consett Spanish Ore [L]	1 0	2½ 2¾
20	Darlington Iron Co. [L]	18 10	¾ 1¼
50	Davy Brothers [L]	22 10	
23	Ebbw Vale Co. [L]	20 0	5½ 6½
8	Genl. Mining Ass. [L] (ful.pd.)	8 0	7 7½
50	Knowles, Andrew, and Co. [L]	25 0	6⅞ 7⅛
20	Llynvi and Tondu [L]	20 0	3 3¼
10	Lydney & Wigpool Iron Ore [L]	9 12	½ 1
10	Midland Iron Co. [L]	5 0	1½ 2 pm
10	Monkland Iron & Coal Co. [L]	10 0	
4	Mwyndy Iron Ore [L]	3 15	⅛ ⅜
62½	Nant-y-Glo & Blaina (8 p.c. prf.)	62 10	48 50
3	Nerbudda Coal and Iron [L]	2⅝	1½ 1⅞
10	Newport Abercarn Coal Co. [L]	10 0	9½ 10½
35	Palmer's Shipbldg. & Iron [L]	35 0	25¼ 25¾
100	Parkgate Iron Co. [L]	65 0	73 73½
20	Patent Nut and Bolt [L]	14 0	24½ 25
50	Pearson and Knowles, B.	50 0	30 32
20	Pelsall Coal and Iron [L]	20 0	11 12
5	Rhymney Iron Co. [L]	5 0	1¼ 1¾
10	Sandwell Park Colliery Co. [L]	10 0	
100	Shotts Iron Co. [L]	100 0	35 37½
25	Sheepbridge Iron and Coal [L]	20 0	8 8½
50	Silkstone & Dodw. Cl. & Iron [L]	45 0	
50	Somorrostro Iron Co. [L]	50 0	
100	Staveley Iron and Coal Co. [L]	60 0	60 62½
100	Ditto ditto B.	10 0	10 10½
5	Teesside Iron & Engine Works	5 0	¾ 1
50	Tredegar Iron and Coal, A [L]	30 0	20 20½
25	Ditto ditto B.	25 0	17¼ 17¾
10	Vancouver Coal [L]	8 0	5½ 6
25	W. Cumberland Iron & Steel [L]	20 0	4¾ 5¼

BANKS.

Issue.	Shares.		Pd.	Clos. pr.
100000	10	Agra [L]	all	10 10½
80000	20	Anglo-Egyptian Banking [L]	all	16½ 17½
30000	40	Bank of Australasia	all	88 90
12500	20	Bank of British Columbia	all	23 24
120600	50	Bank of British North America	all	54 56
10000	25	Bank of Egypt	all	27 28
50000	20	Bank of New South Wales	all	65 67
100000	10	Bank of New Zealand	all	28 29
25000	25	Bank of South Australia	all	44 46
120000	50	Bank of Victoria	25	35 37
40000	20	Chartrd. of Ind., Aust., & China.	all	22 23
30000	25	Ch. Merc. of Ind., Lond., China.	all	17 18
20000	100	Colonial	30	64 67
50000	20	English Bk. of Rio de Janeiro [L]	10	13 13½
60000	25	London and River Plate [L]	10	13½ 14½
60000	7	London and San Francisco [L]	all	6 6½
150000	20	London Chartered of Australia	all	19½ 20½
100000	10	National Bank of N. Zealand [L]	3½	3½ 4
60000	25	Oriental Bank Corporation	all	10 11
12500	10	Queensland National [L]	6	12¼ 12½
40000	100	Stndrd. of South Africa [L].	25	39 41
[illegible]000	25	Union of Australia	all	72 74

GAS COMPANIES.

Issue.	Shares.		Pd.	Clos. pr.
5000	20	Bahia [L]	all	22½ 23½
510000	5	Bombay [L]	all	6 6½
10000	5	Ditto, New [L]	4	4½ 5
29700	Stk	Brentford Consolidated	100	190 195
14000	20	British	all	40 42
60000	Stk	Commercial Consolidated	100	245 250
20000	20	Continental Union [L] Orig.	all	33½ 34½
20000	20	Do. do. New, 1869, 1872	14	22½ 23½
10000	20	Do. do. 7 per ct. Preference	all	28 29
23406	10	European [L]	all	19 20
94850	Stk	Gaslight and Coke, A, Ord.	100	198 202
284200	Stk	Do. 4 per cent. Deb. Stock	100	104 106
5000	10	Hong Kong and China	all	17 18
2800000	Stk	Imperial Continental	100	189 193
12000	5	Malta & Mediterranean [L]	all	2½ 3
100000		Metrop. of Melbourne 6 p.c. Deb.		
25000	20	Monte Video [L]	all	16½ 17½
10000	5	Ottoman [L]	all	4½ 4¾
30000	5	Oriental [L]	all	7½ 8
27500	20	Rio de Janeiro [L]	all	25½ 26½
500000	Stk	South Metropolitan, A	100	255 265
50000	Stk	Ditto, ditto, B	100	210 220

TRAMWAYS.

Issue.	Shares.		Pd.	Clos. pr.
40000	5	Anglo-Argentine [L]	all	6¼ 6¾
10000	10	Barcelona [L]	all	8½ 9½
7140	10	Belfast Street Tramways	all	8 8½
3050	10	Birkenhead, Ordinary	all	1 2
3000	10	Ditto, 6 per cent. Preference	all	5 6
9290	10	Bristol [L]	10	6½ 7½
25000	10	Bordeaux Tram & Omnibus [L].	all	8 8½
25050	10	Calcutta [L]	all	9½ 10½
3200	10	Chester [L]	all	
24000	10	Dublin	all	7½ 8½
14690	10	Edinburgh Street Tramways	all	9½ 10
35000	10	Glasgow Tramway & Omni. [L].	9	14½ 15½
10000	10	Hughes Loco. and Tram. works	all	
7500	10	Hull Street Tramways	all	8½ 9
7500	10	Imperial [L]	all	1 1½
34000	10	Liverpool Unit. Tram & Om. [L]	all	9½ 10½
25000	10	London [L]	all	14½ 15½
15000	10	London Street Tramways	all	16½ 17
60000	10	North Metropolitan	all	17½ 17¾
8000	10	Nottingham and District [L]	all	8 8½
15947	10	Provincial [L]	all	8 8½
6000	10	Sheffield	all	3½ 4½
5000	10	Southampton	all	4½ 5½
6000	10	Sunderland [L]	all	3½ 4½
10000	10	Swansea [L]	all	
12000	10	Tramways of France [L]	all	2½ 3½
16500	10	Tramways of Germany [L]	all	11 11½
20000	5	Tramways and Gen. Works [L].	all	1 1½
40000	5	Tramways Union [L]	all	3½ 3¾
25000	10	Vale of Clyde	6	
7200	10	Wolverhampton [L]	all	3½ 4

TELEGRAPH COMPANIES.

Shares.		Pd.	Clos. pr.
Stk.	Anglo-American	100 0	37 38
10	Brazilian Submarine	10 0	9½ 10
10	Cuba	10 0	10 10½
10	Direct Spanish	9 0	4¼ 4¾
20	Direct United States Cable	20 0	10¾ 11¼
10	Eastern	10 0	10¾ 11¼
10	East. Exten. Austr. and China	10 0	11½ 11¾
10	German Union	10 0	10 10½
10	Great Northern of Copenhagen	10 0	13¼ 13¾
25	Indo-European	25 0	30½ 31½
10	London Platino Brazilian	10 0	3¼ 3¾

London: Printed by Richard Middleton, and published by Henry English (the proprietors), at their office, 26, Fleet Street, E.C., where all communications are requested to be addressed.—March 22, 1884.